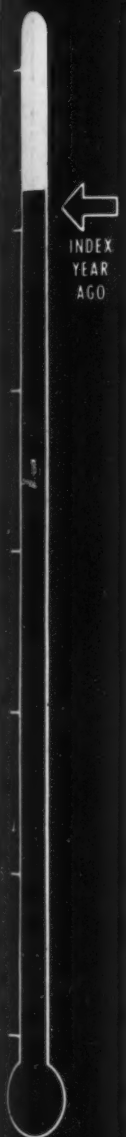
F500.1
B979
v.817

BUSINESS WEEK

INDEX ON PAGE 22



CLUE TO 1955 BUYING

UNIVERSITY OF GEORGIA

People's Confidence: Still Rising

Latest Michigan Survey of Consumer Attitudes (page 124)

A McGRAW-HILL PUBLICATION

NOV. 27, 1954

GENERAL LIBRY
ACQUISITIONS DIV
UNIV OF GA
ATHENS GA



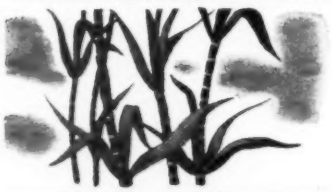
Potatoes?



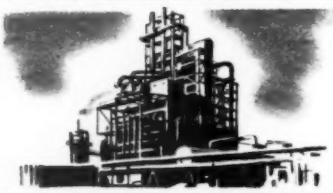
RYE GRAIN ?



BARLEY ?



Sugar Cane ?



Petroleum ?

✓ Check the largest source of Ethyl Alcohol

Right you are if you checked petroleum, for more industrial ethyl alcohol is produced from ethylene gas, a product of petroleum, than from all other sources combined. More than three-quarters of the nation's supply comes from this source.

Industry uses ethyl alcohol in enormous quantities . . . in plastics, drugs, insecticides . . . in production of hundreds of other products. In aeronautical research, hundreds of pounds of ethyl alcohol are burned in seconds to propel a rocket at twice the speed of sound.

Shell Chemical was the first to develop a one-step process for the commercial manufacture of ethyl alcohol. Today, expanded, its direct hydration plant at Houston contributes a substantial percentage of the national supply.

Shell Chemical Corporation

Chemical Partner of Industry and Agriculture

NEW YORK

Installing PROFITS

Sprinklers, piping, hangers, valves — all that meets the eye as you watch installation of "Automatic" Sprinkler fire protection for your business. You don't see the PROFITS to be earned from reduced insurance premiums; nor the additional insurance **for less money** that would now become available. Nevertheless, they're tangible benefits appearing continuously on the PROFIT side of the ledger, long after amortization of the investment.

It's profitable to think in terms of adequate fire protection and the economics involved. Our Bulletin 66, "The ABC of Fire Protection," tells what you can do to reduce overhead, maintain production — save buildings, equipment and lives. Write for your copy today.

"Automatic" Sprinkler

CORPORATION OF AMERICA

YOUNGSTOWN, OHIO

Offices in principal cities of North and South America



"Automatic" Sprinkler designs, engineers, manufactures and installs approved systems of fire protection for all classifications of occupancy. Examples of the thousands of industrial, commercial and institutional properties protected include:







"Automatic" Sprinkler

First in Fire Protection


Just
your
type!
There's a Remington *Executive type* style to suit every business . . . any letterhead! Choose from over 115 type faces available with Remington typewriters to get truly distinctive, truly executive-looking letters you'll be proud to sign.
For the complete story of how to improve the appearance of your correspondence by selecting an appropriate type face and letterhead-harmonizing ribbon color, write for a free copy of "Just Your Type," R8685, Remington Rand, Room 2106, 315 Fourth Avenue, New York 10, N. Y.
Remington Rand
THE FIRST NAME IN TYPEWRITERS
Remington

BUSINESS WEEK

EDITOR & PUBLISHER Elliott V. Bell
MANAGING EDITOR Kenneth Kramer

ASSISTANT MANAGING EDITOR Robert B. Colborn
ASSOCIATE MANAGING EDITORS John L. Cobbs, Peter French, Eugene Miller

DEPARTMENTS

Business Outlook: Clark R. Pace, *Editor;* Robert H. Persons, Jr.
Commodities: Gertrude Charloff, *Editor*
Finance: William McKee Gillingham, *Editor;* Paul D. Gesner, David B. Carlson, Jr.
Foreign: Howard Whidden, *Editor;* Paul R. Miller, Jr.
Industrial Production: Charles M. Garvey, *Editor;* David C. Allison
Labor: Merlyn S. Pitzele, *Editor;* Edward T. Townsend
Management: Richard L. Waddell, *Editor;* Richard M. Wight
Marketing: Carl Rieser, *Editor;* Cora Carter, John C. L. Donaldson
Personal Business: Guy Shipler, Jr., *Editor;* Ann Masse
Research: George J. Gray, Jr., *Editor*
Illustration: Harry Jensen, Kate McSweeney, *Editors;* Robert Isear *(Pictures-Photography)*, Bernard R. Clorman, Herbert F. Kratovil, Jomary Mosley, Arthur Richter
Regions: Frank J. Fogarty
Statistics: Elsa Denno
The Trend: M. J. Rossant
Library: Dorothy Roantree, *Librarian;* Emily Cherry, Ruth Shalvoy
Assistant to the Editor & Publisher: John F. Hartshorne

NEWS EDITORS

T. B. Crane *(Senior News Editor)*, Robert F. Deed, D. A. Drennen, Maxwell D. Gunther, Lawrence H. Odell, Doris I. White

EDITORIAL ASSISTANTS

Mary T. Beckerle, Edward J. Burgess, Jr., Mary M. Burgess, Jean Drummond, Barbara Kleban, Alice Marks, Jacqueline M. Pitcher

ECONOMICS STAFF

Dexter M. Keezer, *Director;* William H. Chartener, Peter J. Davies, Richard Everett, Douglas Greenwald, Margaret Matulis, Dora K. Merris, Robert P. Ulin

DOMESTIC NEWS SERVICE

Atlanta Bureau: Wm. H. Kearns, *Manager*
Boston Bureau: Paul Finney, *Manager*
Chicago Bureau: James M. Sutherland, *Manager;* Mary B. Stephenson, Dorothy Miller
Cleveland Bureau: Robert E. Cochran, *Manager;* Wm. N. Troy
Detroit Bureau: William Kroger, *Manager;* Susan Tower
Houston Bureau: Normand DuBeau, *Manager;* Mary Schiflett
Los Angeles Bureau: Thomas M. Self, *Manager;* Lorraine M. Lemmon
Philadelphia Bureau: W. B. Whichard, Jr., *Manager;* Esther A. Schultz
Pittsburgh Bureau: Richard N. Larkin, *Manager*
San Francisco Bureau: Richard Lamb, *Manager;* Joanne O'Brien
Toronto Bureau: Werner Renberg, *Manager*

Washington Bureau: George B. Bryant, Jr., *Manager;* Glen Bayless, Alan E. Adams, Carter Field, Jay Flocken, Boyd France, William Gilmour, Sam Justice, Donald O. Loomis, Gladys Montgomery, Arthur L. Moore, E. William Olcott, Morton A. Reichek, Caroline Robertson, John T. Skelly, Vincent Smith.

Correspondents: Akron, Albany, Austin, Baltimore, Birmingham, Buffalo, Charleston, Charlotte, Cincinnati, Columbus, Dallas, Denver, Des Moines, Duluth, Fort Worth, Greensboro, Hartford, Jacksonville, Kansas City, Knoxville, Little Rock, Louisville, Memphis, Miami, Milwaukee, Minneapolis, Nashville, New Orleans, Oklahoma City, Omaha, Orono, Phoenix, Portland (Ore.), Providence, Richmond, Rochester, Salt Lake City, San Antonio, San Diego, Seattle, St. Louis, Syracuse, Toledo, Wilmington, Worcester, Honolulu. **Correspondent Relations:** Dorothea Schmidt

FOREIGN NEWS SERVICE

Editor: Joseph K. Van Denburg, Jr.
Bonn: Gerald W. Schroder
London: Edward W. S. Hull
Manila: Herbert Leopold
Mexico City: John Wilhelm
Paris: John O. Coppock
Sao Paulo: Lionel J. Holmes
Tokyo: Dan Kursman

Correspondents: Amsterdam, Athens, Bangkok, Beirut, Belgrade, Bogota, Bombay, Brussels, Buenos Aires, Cairo, Caracas, Ciudad Trujillo, Copenhagen, Djakarta, Durban, Geneva, Guatemala City, Havana, Helsinki, Istanbul, Johannesburg, Karachi, La Paz, Lima, Madrid, Melbourne, Oslo, Ottawa, Panama City, Quito, Reykjavik, Rome, Salzburg, San Juan, San Salvador, Santiago, Stockholm, Sydney, Tehran, Tel Aviv, Wellington, Winnipeg.

ADVERTISING DIRECTOR Herman C. Sturm
ADVERTISING MANAGER John M. Holden
BUSINESS MANAGER Richard E. McGraw

BUSINESS WEEK • NOV. 27 • NUMBER 1317

(with which are combined The Annalist and the Magazine of Business) ● Published weekly by McGraw-Hill Publishing Company, Inc., James H. McGraw (1860-1948), Founder ● Publication Office, 99-129 North Broadway, Albany, N. Y. ● Editorial, Executive and Advertising Offices, 330 West 42nd St., New York 36, ● Donald C. McGraw, President; Willard Chevalier, Executive Vice-President; Joseph A. Gerardi, Vice-President and Treasurer; John J. Cooke, Secretary; Paul Montgomery, Executive Vice-President, Publications Division; Ralph B. Smith, Vice-President and Editorial Director; Nelson Bond, Vice-President and Director of Advertising. Subscriptions: Address correspondence regarding subscriptions to J. E. Blackburn, Jr., Vice-President and Director of Circulation, Business Week, 99-129 N. Broadway, Albany 1, N. Y., or 330 West 42nd St., New York 36. Allow one month for change of address.

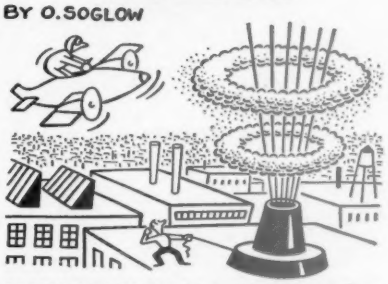
Subscriptions to Business Week are solicited only from management-men in business and industry. Position and company connection must be indicated on subscription orders.

Single copies 25c. Subscription rates—United States and possessions $6.00 a year; $12.00 for three years. Canada $7.00 a year; $14.00 for three years. Other Western Hemisphere countries and the Philippines, $15 a year; $30.00 for three years ● All other countries $25 a year; $50.00 for three years ● Entered as second class matter Dec. 4, 1936, at the Post Office at Albany, N. Y. under Act of Mar. 3, 1879 ● Printed in U. S. A.

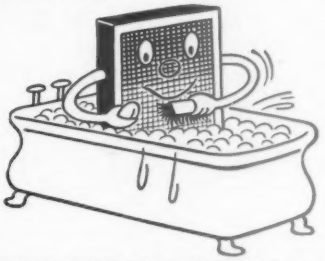
Copyright 1954 by McGraw-Hill Publishing Co., Inc.—All Rights Reserved.

AIR-MAZING FACTS

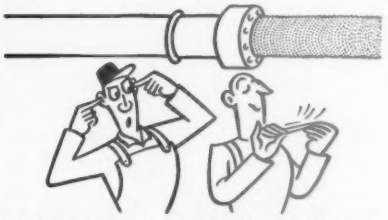
BY O. SOGLOW



BLOWS SMOKE RINGS A MILE HIGH! One expert's solution to the problem of unwanted industrial smoke is a huge drumlike affair called a smoke "gun". A factory's smoke would pour into the "gun"; when full, an explosive charge would blow smoke rings skyward at a speed of 1,000 m. p. h. to a height of one mile where winds would harmlessly blow them away.



NEW FILTER TAKES ITS OWN BATH! Automaze air filters stay clean by continuously taking a bath. Special "pulse-action" thoroughly washes each panel automatically, renews adhesive. Goes 3 to 6 months without attention.



STOP THAT RACKET! Air-Maze in-line silencers boost employee efficiency by greatly reducing air intake noise from diesel engines. Also available in combination with oil bath and oil-wetted air filters.

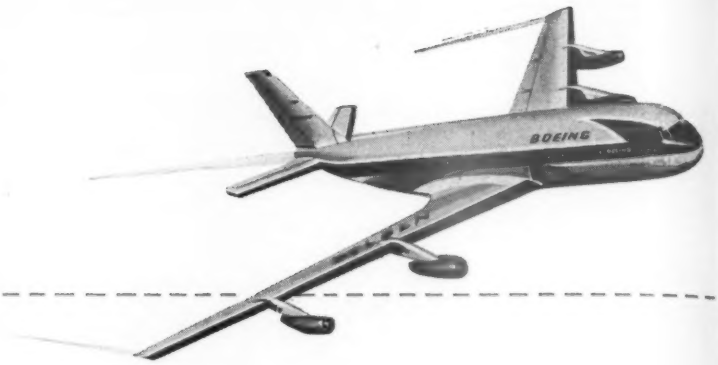
IF YOU BUILD OR USE engines, compressors, air-conditioning and ventilating equipment, *or any device using air or liquids* — the chances are there is an Air-Maze filter *engineered* to serve you better. Representatives in all principal cities. For condensed product catalog, write Air-Maze Corporation, Dept. C, 25000 Miles Rd., Cleveland 28, Ohio.

AIR-MAZE
The Filter Engineers

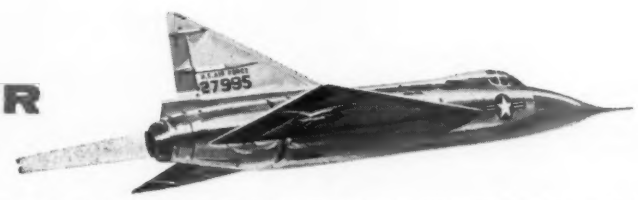
AIR FILTERS
SILENCERS
SPARK ARRESTERS
LIQUID FILTERS
OIL SEPARATORS
GREASE FILTERS

THESE 5 LEADING AIRCRA

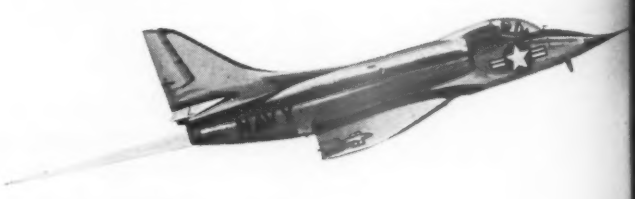
BOEING



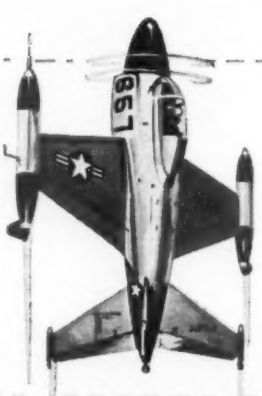
CONVAIR



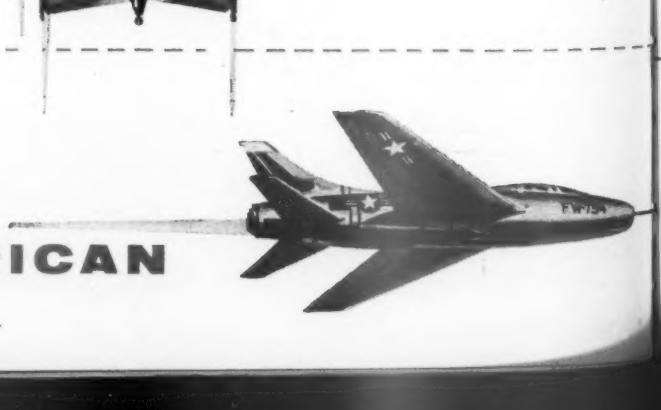
DOUGLAS



LOCKHEED



NORTH AMERICAN



RAMPANIES

GET THINGS DONE

at 14,000 operations a second with giant IBM Electronic Data Processing Machines



Giant IBM Data Processing Machines are getting things done fast in the aircraft industry. They're doing all kinds of work from production planning and job sequencing operations to helping engineers design planes and analyze flight test data.

Getting facts fast is important in every business field. That's why the same IBM techniques that speed work in the aircraft industry are being applied to business accounting by leading companies across the country.

Whether you operate a small business or a large one, there's an IBM Electronic Data Processing Machine designed to help you get things done.

IBM

TRADE MARK

World's Leading Producer of Electronic Accounting Machines

International Business Machines
590 Madison Avenue, New York 22, N.Y.



Say, what's the ne

For generations the pin boy has labored in the pit to set 'em up every time you knock 'em down. It's a back-breaking, time-consuming job . . . collecting, spotting, setting pins and returning a 16-pound ball over and over, hour after hour. But now bowling has a new set-up thanks to the amazing new mechanical marvel, the AMF Automatic Pinspotter.

Designed and manufactured by American Machine & Foundry Co., this wizard of the pits can work without rest 24 hours a day, setting, clearing and respotting pins with split-hair accuracy. In fact, this unit is so exacting, so dependable that it does everything to assure a strike every frame except aim the ball.

One of the problems encountered in perfecting the AMF Automatic Pinspotter was the need for a small but vital belt conveyor which would quickly clear the pit . . . and—more important—stand up under the constant pound-

HEWITT-ROBINS INCORPORATED

HEWITT RUBBER DIVISION • ROBINS CONVEYORS DIVISION



new set up in bowling?

ing of heavy bowling balls and flying hardwood pins. For the answer, AMF turned to Hewitt-Robins, the *only* organization specializing in the design and manufacture of both conveyor belting and conveyor machinery. The solution was a conveyor with a 58"-wide, specially constructed, 4-ply endless belt.

Building a better belt conveyor to make bowling more enjoyable—and increase operators' profits—is but one of countless examples of the way in which Hewitt-Robins is helping American Industry.

Whether it's a belt conveyor system (both belting *and* machinery) to convey solids in bulk —vibrating equipment to screen, feed or shake out material—or hose to handle liquids and gases, Hewitt-Robins can solve your particular problem, large or small. Contact our nearest sales office, your local Hewitt-Robins distributor, or write direct to our executive offices.

STAMFORD, CONNECTICUT

ROBINS ENGINEERS DIVISION • RESTFOAM DIVISION



The oil rig is going to sea—and the versatile Bell helicopter is going with it. The search for oil has extended to the bottom of the ocean and drilling rigs are springing up miles from shore.

Quick, safe, dependable transportation for men, supplies and equipment to these floating operations posed a major problem to oil and drilling companies.

The problem was easily solved. Bell helicopters, *equipped with floats,* are providing the answer for many operators. Heavy equipment is moved via boat and barge but key personnel, supplies and vital repair parts are speeded to off-shore rigs in reliable Bell helicopters.

Low operation and maintenance cost, plus more than a million flight hours, makes the Bell helicopter the best vehicle for off-shore work, where lost minutes mean thousands of lost dollars.

Bell helicopters enjoy a record of economically sound performance in the petroleum industry—*on shore and off shore.* We'd like to show you how this experience can benefit your company. For complete details—including the names of helicopter operators in your area—wire or write:

BELL Aircraft CORPORATION

Dept. 052, P. O. Box 482, Fort Worth 1, Texas

Sales and service representatives in 60 countries

READERS REPORT

Sixty Years Ago

Dear Sir:

The article, Still in the Driver's Seat [BW—Nov.6'54,p25] . . . stated that the Republicans came out of the South with a net gain of one seat—"the first time the GOP has won Southern seats in an offyear election since reconstruction days."

If you will go back 60 years to 1894, you will find that to be the banner year for GOP gains in an offyear election. It gained a total of 127 House seats. . . .

FREDERICK L. HAEFNER
PORTLAND, ORE.

"Foreign" Consternation

Dear Sir:

As a regular . . . reader of your publication, I thoroughly agreed with your remarks about Sen. McCarthy [BW—Oct.2'54,p184], but was . . . somewhat puzzled by letters appearing in the Oct. 30 issue [page 8], in which various correspondents contended that the good senator had been grossly misrepresented.

If his "career" as published is true, he would long ago have been in jail were he in Canada or England; if not true he would be able to collect handsomely for libel, which apparently he has not tried to do. Some specific cases to which I refer are:

(1) McCarthy's activities as a Wisconsin Circuit Judge, particularly the Quaker Dairy Case.

(2) His campaign tactics against Sen. LaFollette.

(3) His employment by the Pepsi-Cola-Sugar lobby.

(4) His conduct during the 1947 Senate Housing probe.

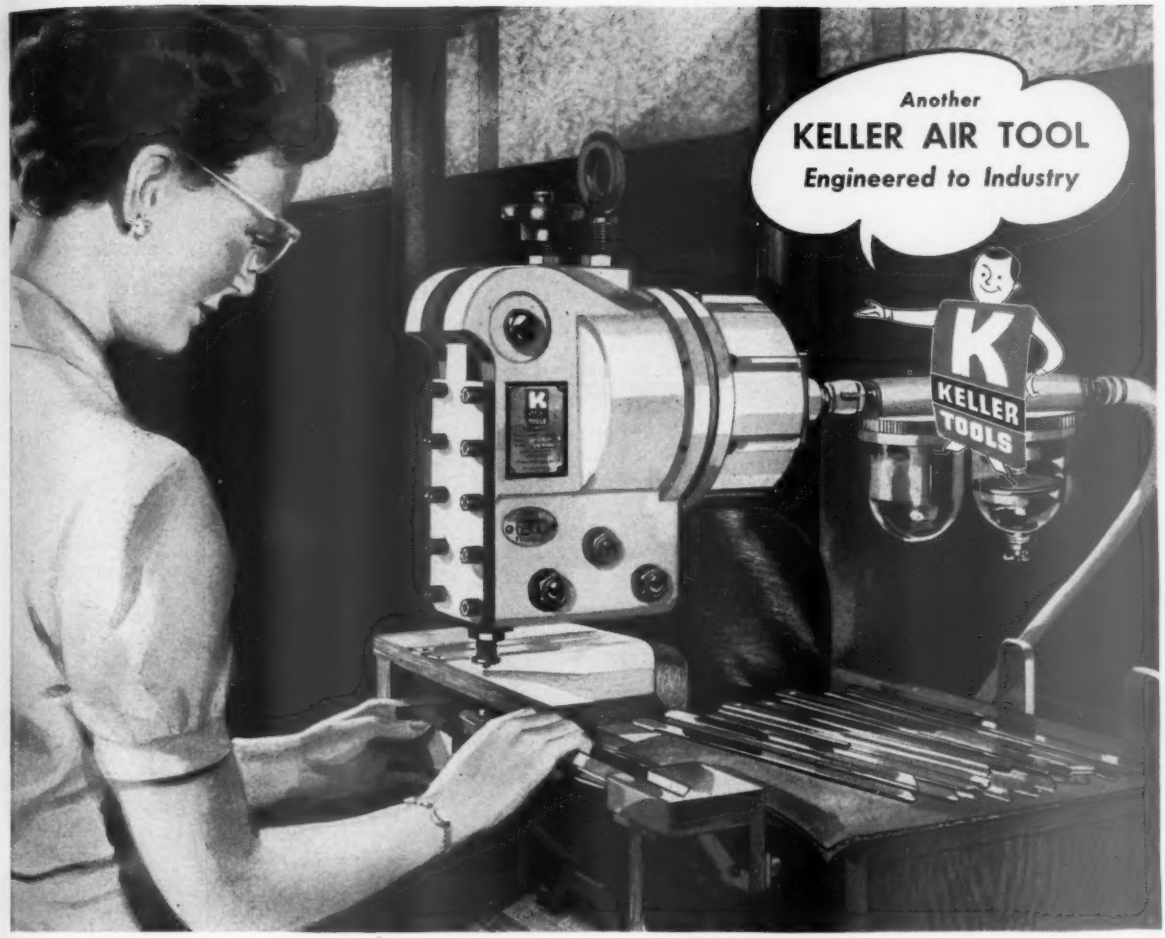
(5) His $10,000 "fee" paid by the Lustron Corp.

(6) His performance during the hearings regarding the "Malmedy Massacre."

(7) His conduct in the 1950 election campaign that unseated Sen. Millard Tydings.

These cases appear to be authentic enough and sufficiently well documented to make an unbiased bystander feel that they are true, especially in view of the fact that no action has been taken with regard to the libel aspect.

Possibly you could enlighten me as to the validity of the charges listed. If they are valid, you can well understand the consternation



SQUEEZE PLAY BOOSTS PRODUCTION SCORES

A compression riveter that delivers its power with a squeeze instead of a slap, has boosted the assembly of these toggle links to 150 units an hour. The links are used in making folding high chairs.

A second compression riveter in the same plant swages clips onto adjusting springs—an operation that has also attained the high rate of 150 pieces an hour.

The reason for these remarkable production scores is the riveter itself, which operates on compressed air. When the ram of a Keller Compression Riveter comes down against the work, it doesn't need to strike with the full impact necessary to carry through to the end of the stroke because air pressure builds up steadily behind the ram and keeps forcing it down . . . maximum pressure being attained only at the end of the stroke.

In contrast with riveters that depend on the initial impact for carry-through, Keller Pneumatic Riveters cause less deformation of small, fragile parts, less distortion, less breakage, and fewer rejects.

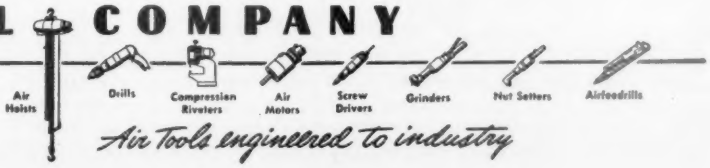
As a result, Keller Compression Riveters have many uses where a squeeze is better than a slap — for punching, crimping, staking, and forming operations in addition to riveting.

The compression riveter is only one of many Keller Air Tools that speed production and reduce costs. Have you discussed your problems with the factory-trained Keller application engineer near you? He is as near as your phone.

KELLER TOOL COMPANY

1301 FULTON STREET

GRAND HAVEN, MICHIGAN



Air Tools engineered to industry



A picture worth millions– by Raytheon Microwave

Nipped in the bud—costly fires that mean losses in millions. Picked up by a rotating TV camera, the first signs of fire are beamed by Raytheon Microwave Transmitter to forest rangers at a distant central location.

Essential to this relay system is a Raytheon Klystron—rugged microwave tube engineered by the company that for nearly 30 years has pioneered electronic products for home, industry and the armed forces. More and more, the name Raytheon is a symbol of . . . ***"Excellence in Electronics."***

RAYTHEON

*Trademark

RAYTHEON MANUFACTURING COMPANY, WALTHAM 54, MASSACHUSETTS



ALL-NEW RAYTHEON CHALLENGER TV has exclusive "stand-up" tuning. Comes in 8 smart *decor* colors. Compact, portable, sleek—its cabinet face is *all* picture.

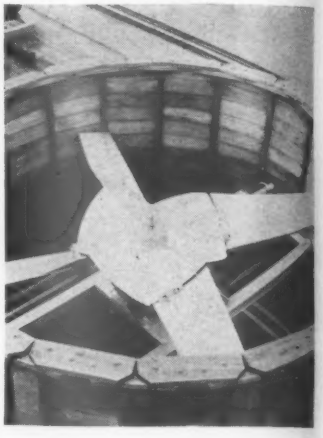


SMOKE-FREE, DUST-FREE AIR! Raytheon Micronaire* Electrostatic Air Cleaner cleans and circulates room air with 99.2% efficiency. Compact, portable.

that reigns when we "foreigners" stand back and view our neighbor to the south.

D. F. O'SULLIVAN
INSPECTOR
WAWANESA MUTUAL INSURANCE CO.
VANCOUVER, B. C.
CANADA

• The Senate is now considering censure of McCarthy, and its action is already serving to bring into sharp focus his activities. In the last resort, however, he will be judged by the people of his state.



Small Fan?

Dear Sir:

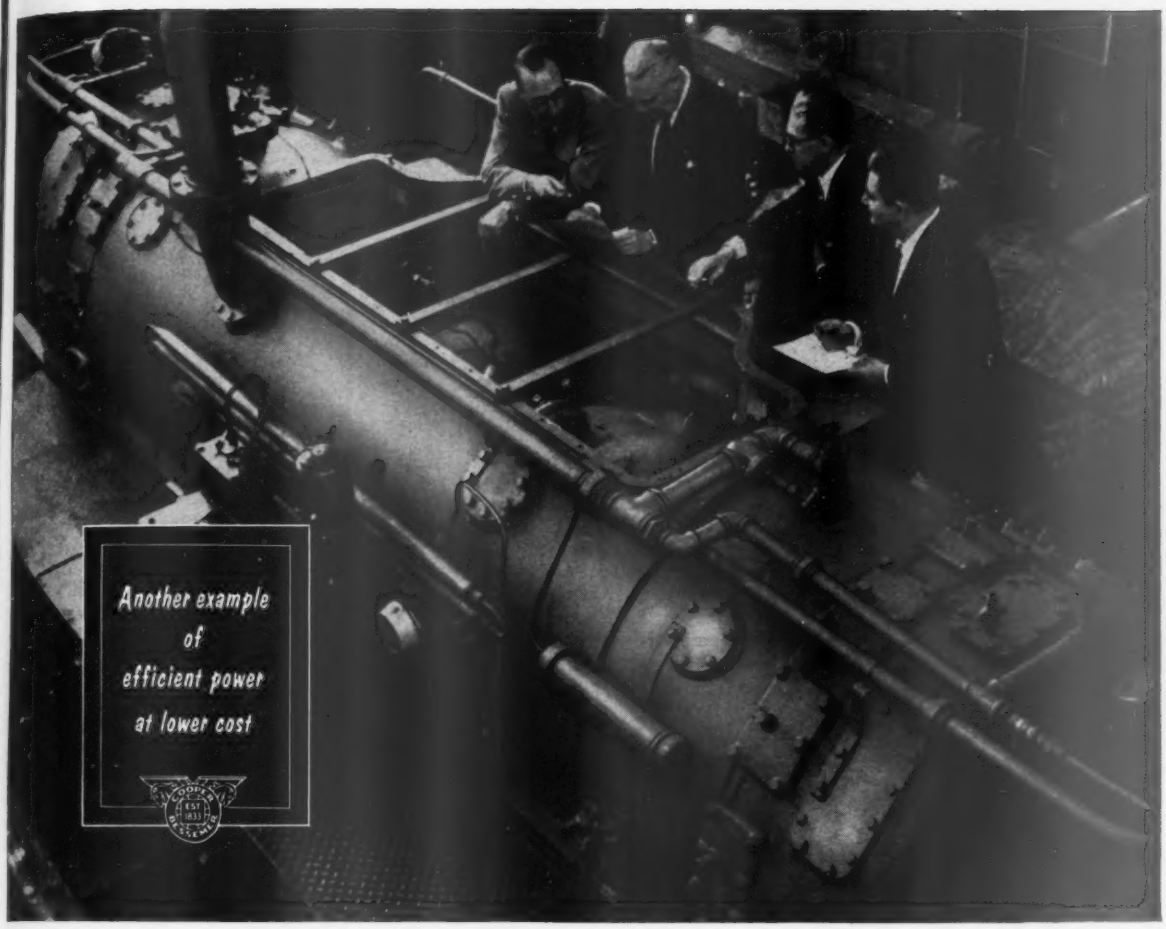
. . . I was amazed to discover a misleading caption (Giant Fan is Emergency Lung) under the picture of a cooling tower fan which accompanied the Walter Reed Medical Center article [BW—Oct. 9'54,p32].

Your readers will be under the impression that this "giant" fan ventilates the building. Actually, it is part of the cooling tower. The fan actually draws air through the cooling tower. This air cools water that has picked up the heat from the refrigeration machinery.

The view you have shown (above) is looking down the fan, and in operation of the tower, the air moves up and toward the camera position. "Giant" is hardly the word, for the fan pictured is . . . one of the smaller ones manufactured by us. Some cooling towers manufactured by us have fans up to 19-ft in diameter. . . .

The J. F. Pritchard Co. of Cali-

Letters should be addressed to Readers Report Editor, BUSINESS WEEK, 330 West 42nd Street, New York 36, N. Y.



Shape of things to come...IN POWER!

THE pictured machine—*now running in Cooper-Bessemer's experimental laboratory*—may soon incite a revolution in power circles. Here's the background . . .

The well publicized gas turbine offered power users today, may be new and intriguing, but it sure faces problems! One big poser is how to make it run with anywhere near the fuel economy of present reciprocating engines. Without solving this and related problems, it's hard to see how direct fired gas turbines can be considered where dollars count.

It was only natural for Cooper-Bessemer, pioneer in gas turbine supercharging, to tackle this problem. That's where the above machine comes in. It *combines* the gas turbine with Cooper-Bessemer's new free piston engine development, gaining the advantages of both. Result: twice as *much* power per fuel unit as the direct fired gas turbine, in 30 to 60% *less* space. And mister, that's a revolution in *anybody's* power book!

Although the free-piston-gas turbine is *not yet for sale,* it's typical of the development work that goes on all the time at Cooper-Bessemer. That's why, when you need power, it always pays to find out about the *newest* things being done by one of America's *oldest* engine builders.

Mount Vernon, Ohio

COOPER-BESSEMER

Grove City, Pa.

New York • Chicago • Washington • San Francisco • Los Angeles • San Diego • Houston • Dallas • Odessa • Pampa • Greggton • Seattle • Tulsa • St. Louis • Gloucester • New Orleans • Shreveport Cooper-Bessemer of Canada Ltd., Halifax, N. S., Edmonton, Alberta

DIESELS • GAS ENGINES • GAS-DIESELS • ENGINE-DRIVEN AND MOTOR-DRIVEN COMPRESSORS • HIGH PRESSURE LIQUID PUMPS

Rockwell Report



by W. F. ROCKWELL, JR.
President
Rockwell Manufacturing Company

A NUMBER OF PEOPLE have commented on the frequency with which these reports deal with some phase of engineering, and ask if our company is more engineering-minded than most.

No progressive, expanding company can afford *not* to be engineering minded today. For if this is the atomic age, the electronics age, and the chemical age, it is also—to a greater extent than many people realize—the Engineering Age.

But even men involved in the day-to-day operation of a business are sometimes a little surprised when they take a look at all of the various kinds and types of engineers they employ. In our own case—because we are diversified—the list is a long one. It ranges from industrial and methods engineers through the many different mechanical, chemical and metallurgical men specializing in problems and products related to the petroleum, gas, processing, chemical, metalworking, woodworking and other industries we serve.

Many of these engineers are concerned with the day-to-day production of present products. Others work on new or improved products and methods for the future. Still others are doing basic research not necessarily related to any specific product. But taken together, they help us provide better answers to our customers' problems. In a period when both problems and their answers are becoming increasingly complex, we can think of no better growth insurance.

* * *

Factory Management and Maintenance Magazine has awarded us a citation "For the construction of a significant new industrial plant." The Editors selected our new Sulphur Springs, Texas, plant for this honor because in it, they say, "are to be found noteworthy advancements in industrial plant design." When we built the plant, we were thinking not of awards but of efficiency, worker comfort (it is one of the first completely air-conditioned plants of its size), easy maintenance, and expandability. Nevertheless, we are happy that in achieving that we have also been singled out for making a contribution to American industrial progress.

* * *

Practically all chart recording instruments in modern plants are driven by clocks which turn the chart beneath stationary pens to keep running records of pressures, volume, temperatures, etc. These, like all clocks, require maintenance and periodic replacement—and the stocking of spare clocks of various speeds (rotation rates may vary from a few hours up to eight days or more) has always been an expensive problem. Recently our Instrument Division devised what is proving to be an economical solution: a nearly universal chart drive. Because it is designed so that it can be fitted into almost any existing instrument case by means of adaptors, and adjusted to provide any one of eleven different speeds, it reduces considerably the number of clocks that need be kept in reserve.

* * *

One phase of our rather comprehensive sales training program often surprises trainees, who wonder what on earth it has to do with selling Rockwell products. This is a "driving clinic" conducted by the state police, and including not only safety films and lectures, but actual driving tests. We feel that such driver training is very worthwhile both from the standpoint of human safety, and the protection of the company cars driven by salesmen. Actually, it is recognition of the fact that driving on today's crowded roads has become a highly complex act in which split-second decisions are best made against a background of good driving habits.

One of a series of informal reports on the operations and growth of the
ROCKWELL MANUFACTURING COMPANY
PITTSBURGH 8, PA.
for its customers, suppliers, employees, stockholders, and other friends

fornia, a division of J. F. Pritchard & Co., manufactures cooling towers for industrial and air-conditioning applications. The tower featured in your article was designed and installed by the Pritchard organization . . .

HUGH E. ROBERTSON
ADVERTISING MANAGER
J. F. PRITCHARD & CO.
ENGINEERS, CONSTRUCTORS
KANSAS CITY, MO.

Used But Usable

Dear Sir:

The article, A Price Squeeze in Machinery [BW—Oct.23'54,p90] is pretty convincing evidence that the average executive knows very little about machine tools, to compare the industry with mass production industries. The $36,000 machine for polishing was, no doubt, a one-shot proposition, probably one sold every five years. . . . Increased labor and material costs, and a rechecking of the figures on the first one (on which they probably lost money) could easily account for a 50% increase in price. This is no criterion. . . .

No one . . . who knows what he is talking about, can foresee the day when machine tools will be produced on a "mass production basis." During the Korean War . . . the government obtained permission from one of the largest machine tool manufacturers in the world to build several hundred of his machines in a contractor's plant, the manufacturer not being able to . . . meet the demand.

The manufacturer furnished blueprints and engineering advice, and the government appropriated several millions of dollars to finance the project. After spending about $2-million and two years' time, the government canceled the order. Why? Because they found out the hard way that to build machine tools takes mechanics of a type and quality . . . that cannot be found easily in ordinary times, let alone emergencies. . . .

Another reason why mass production is not possible with machine tools is the large number of models built by each manufacturer. [They] are not designed like ladies' fashions—there are no Dior models. Each . . . is designed for definite reasons, such as: To give more production, greater accuracy; to lessen employee fatigue; for greater safety. The largest machine tool manufacturer in the world, Cincinnati Milling Machine Co.,

HOW XEROGRAPHY cuts duplicating costs $30,000 a year for TWA



Trans World Airlines • U.S.A. • EUROPE • AFRICA • ASIA...



SPEEDING financial reports and charts to management

SPEEDING service and maintenance manual revisions

SPEEDING production of forms and illustrative training material

From its earliest beginnings, Trans World Airlines has been in the forefront of aviation development, constantly seeking methods and devices to improve equipment and passenger comfort.

Convinced that xerography offered a new and better way to get paperwork done cheaper, faster and with photographic accuracy, TWA installed XeroX® copying equipment to prepare offset paper masters for duplicating. Result: TWA's annual paperwork expenses trimmed by $30,000! Here's how it's done:

By merely "stripping in" up-to-date data onto the original and then copying it onto a paper master by xerography, monthly revisions in TWA's service manuals and bulky parts catalog are made quickly and easily. Complete production of a new supply of forms manuals takes only three or four days!

Xerography also helps rush current financial and statistical information to management, in just a few hours. Detailed financial reports that cost about $70 using previous methods, now cost just $4 using xerography.

And over at TWA's "Overhaul Base" copies of the maintenance manual are produced quickly and accurately by xerography. Wall size charts are easily included in three manuals by reducing them with the XeroX Camera to 8½x11".

Xerography is used by companies of all kinds, large and small, in thousands of applications. Anything written, typed, printed or drawn can be copied onto paper masters by xerography. With xerography, copies can be made from one or both sides of original material.

For use in diazo type machines, translucent intermediates can be made from an original subject in the same speedy way.

"The Finest Air Fleet in the World"

The development of TWA goes back to 1925, when Western Air Express was organized to fly one air-mail trip a day between Los Angeles and Salt Lake City, a distance of 575 miles. This was the first major route of TWA's predecessor companies.

Today the network of TWA's routes stretches from coast to coast in the U.S. and across the oceans to Europe, Africa, and Asia. Thus, through the years TWA planning, research, engineering experience have built an airline and a fleet of TWA Skyliners which are setting new standards for fast, dependable, luxury air travel.

SOME USERS IN OTHER FIELDS

AIRCRAFT
Bell Aircraft Corp.

AUTOMOTIVE
Ford Motor Co.

BUILDING MATERIALS
National Gypsum Co.

GOVERNMENT
Federal, State, City

PETROLEUM
Atlantic Refining Co.

RETAIL
H. L. Green Co., Inc.

Write **for proof of performance folders showing how companies of all kinds are cutting costs and speeding paperwork with xerography.**

THE HALOID COMPANY

54-75X HALOID STREET, ROCHESTER 3, N. Y. • Branch Offices in Principal U. S. Cities and Toronto

PRODUCTS FOR XEROGRAPHY
XEROX
THE HALOID CO. • ROCHESTER, N.Y.

XEROGRAPHY

(zo-rog-ra-fee)

The fastest, cheapest, most versatile way to make masters for duplicating



Are you expecting too much from your engineers?

Captive engineering staffs necessarily carry a heavy burden. In any company, application and production engineers must know every detail of their products . . . concentrate largely on immediate technical problems.

Is it wise to burden these men with creative development problems as well? The two jobs are seldom compatible in terms of aptitudes or personnel. Nor is the environment for one the most suitable environment for the other.

Experience has proved that long-range development of new products is most successfully accomplished when based on these important factors:

1. AN IMAGINATIVE APPROACH to the problem, often involving technologies far afield from your own particular product or industry.

2. A TESTED TECHNIQUE for producing ideas and directing them into practical channels, through careful co-ordination and programing.

Many well-staffed companies find these desirable factors available at DFI, an organization concentrating *entirely* on creative product development.

CREATIVE PRODUCT DEVELOPMENT IS OUR FULL TIME JOB!

Designers for Industry, through 19 years of organized research and development for clients in many fields, has built an unusual organization. We retain a creative and imaginative approach to product development problems, yet direct and co-ordinate these efforts in a way that insures practical and cost-saving results. We assume full responsibility . . . whether on a single product phase or a complete, co-ordinated development program. For further information on our services, write for our booklet, *DFI Facilities for Engineering Research and Development.*

Designers for Industry
Incorporated 1935

2915 DETROIT AVENUE • CLEVELAND 13, OHIO

TECHNICAL SURVEYS • RESEARCH AND DEVELOPMENT
DESIGN ENGINEERING • PRODUCTION ENGINEERING

makes over 350 models . . . ranging in price from a few thousand dollars to over two hundred thousand dollars. Many other companies produce from 10 to 100 models each. . . .

The best bet today for any manufacturer who feels that the price of new machinery is "too rich for his blood," is to buy good used machines from a reliable dealer. With few exceptions, machines 10 or 12 years old can be purchased at 20% to 60% of comparable cost of new machines of any particular make. The Machinery Dealers National Assn. binds members to a code of ethics, under which any machine can be returned any time within 30 days if found to be mechanically unsatisfactory, with full refund of purchase price. Such dealer members are located in every part of the United States and Canada. Machinery purchased "used" is just as productive in 95% of instances as new machinery purchased today. . . .

W. E. HAMILTON
W. E. HAMILTON MACHINERY CO.
EVANSTON, ILL.

Down a Peg

Dear Sir:

In Finance Briefs [BW—Nov.13 '54,p52], reference is made to Class 1 rail earnings: ". . . the Assn. of American Railroads . . . puts net for 130 top roads at $394-billion for the first nine months, compared to $650-billion. . . ."

Has the Democratic victory caused such an inflation so quickly?

MILTON M. RODES
SILVER SPRING, MD.

• Only in typographical errors. The correct figures are $394-million and $650-million, respectively.

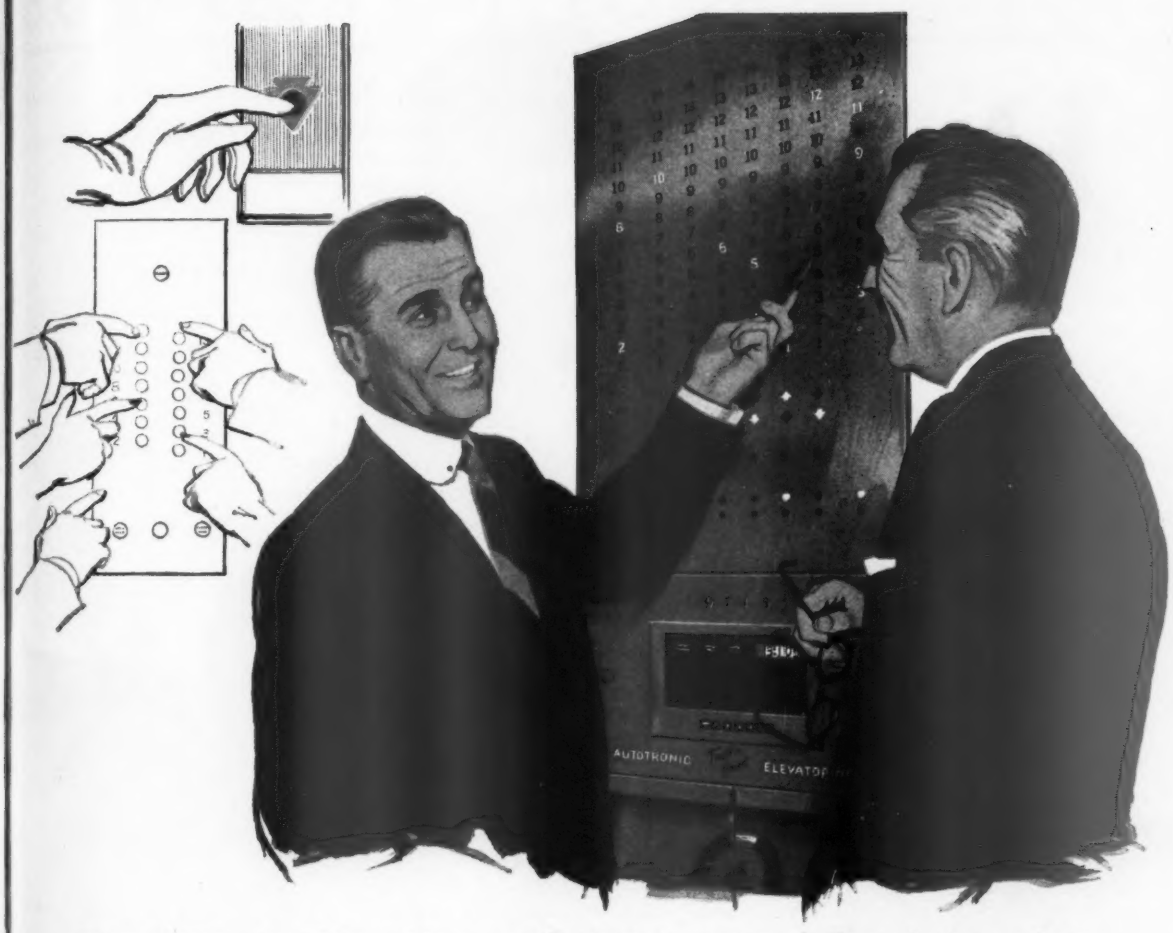
Meals from Machines

Dear Sir:

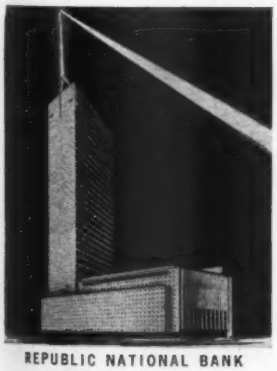
. . . Food Sales: Machines Move In [BW—Nov.13'54,p126] . . . was the most realistic appraisal of the automatic merchandising industry that has ever been voiced outside of the industry's own trade journals.

It will help immensely in clarifying many of the misconceptions that industrial management and the public at large have held concerning the food and beverage vending industry. . . .

RALPH GLOBUS
KWIK KAFE, INC.
BALTIMORE, MD.



Traffic tells the elevators what to do



REPUBLIC NATIONAL BANK
Dallas, Texas

The new 40-story REPUBLIC NATIONAL BANK BUILDING, with its four basement levels, will have 17 Otis AUTOTRONIC operatorless elevators. This is one of more than 175 new and modernized office buildings, hotels, hospitals, banks, and department stores that have given AUTOTRONIC elevatoring an overwhelming vote of confidence—by buying it!

Architects: Harrison and Abramovitz, N. Y. C.
Architects: Gill and Harrell, Dallas
Contractor:
J. W. Bateson and Company, Inc., Dallas

Elevator traffic is people. They step into operatorless cars and press buttons for the floors they want. They touch upper floor corridor buttons to call UP or DOWN cars. These calls vary constantly in number and frequency during a busy building's day.

—as we can show you on an Otis AUTOTRONIC indicator panel in the lobby of a busy building.

The completely automatic supervisory system of AUTOTRONIC elevators is kept aware of every traffic change—*by the traffic itself!* Passenger calls and waiting time data are measured continuously. A change in the traffic pattern is detected automatically—and the group operation of the elevators is changed immediately to give today's finest service.

Completely automatic AUTOTRONIC elevatoring is in operation day and night, holidays, and weekends. And each car with its "automatic elevator operator" is on duty every minute of every day—*electronically!* Call any of our 268 offices for details.

Otis Elevator Company, 260 11th Ave., New York 1, N. Y.

Otis

COMPLETELY AUTOMATIC

AUTOTRONIC®

ELEVATORING



If you Read Between the Lines

...he Prescribes for Your Profits, too!

Through better vision on the job and fewer costly accidents, management profits and workers benefit when safety prescription glasses are worn.

In some areas the services of the ophthalmic professions have not been utilized to verify the lens properties of prescription glasses, fit the glasses to the individual worker and maintain them in proper adjustment. These functions which are the responsibility of the professions, are necessary in assuring the maintenance of safety standards and visual efficiency on the job. About one-fourth of the states now require that corrective-protective glasses shall be available to workers only when provision is made for these adequate professional services.

We are inviting the cooperation of management and safety directors everywhere in seeing that the full cycle of professional services is rendered in connection with your safety prescription glasses. When you utilize these services and standardize on high quality AO† trademarked lenses and frames, you are assured of an investment which can pay for itself many times over in both human and dollar values!

Safety is our business. Safety is your business. Prescribing, checking prescriptions, fitting of prescriptions is the business of the professions. Always specify AO trademarked lenses and frames to assure the maximum safety for your employees. There is none better.

American Optical

AO SAFETY PRODUCTS DIVISION

†T. M. Reg. by American Optical Company

SOUTHBRIDGE, MASSACHUSETTS • BRANCHES IN PRINCIPAL CITIES

BUSINESS OUTLOOK



Here are some November milestones—something for business to give thanks for:

Auto output last week was the year's best by a good margin. That twists seasonal patterns all out of kilter, for the year's high should come in the late spring or early summer.

Steel production this month should be about 7,950,000 tons. That will just miss or just exceed January, best for the year to date.

December ought to be the best month of 1954 by just about any yardstick you may care to apply.

Here again, autos and steel will be the production mainsprings.

Output of new passenger cars should reach 550,000 with no trouble at all (rubbing out April's high of 533,000). Steel, at a bit better than 80% of capacity, won't miss 8½-million tons by much.

—•—

Competitive characteristics of the 1955 model year in autos may be anything but clear, but the production trends are taking shape.

• **Chevrolet and Ford,** to the surprise of no one at all, will fight it out right down to the wire. Each now is roaring along at about 33,000 cars a week—very close to a postwar high for both. And each is running substantially ahead of its rate just before the model change.

• **General Motors,** over-all, rolled about 65,000 new cars off its lines last week. That spread-eagled the field, giving the corporation just a tiny fraction less than 50% of all cars produced.

• **Chrysler** turned out 25,000 cars in its four divisions last week (even though Plymouth still is well short of capacity). You'd have to go back to the summer of 1953 to find another Chrysler figure that high.

• **Independents** haven't yet got their feet under them. Output, at about 5,000 cars a week, cuts a rather inconspicuous figure. However, Packard is only getting going on its new models, and American Motors has just unveiled its 1955 Rambler.

—•—

Auto production for the year once again will confound the skeptics.

Barring serious difficulties of a sort not yet foreseen, **production for 1954 is going to be closer to 5.4-million cars** than the 5.3-million goal (and the 5.3-million figure looked hazy for a good while).

This will fall about 700,000 or 12% short of 1953's production.

The volume for trucks, however, won't go much over 925,000. That would be the poorest postwar year, off about 23% from 1953.

—•—

It's open season for guesses on the rate of steel operations for next year, and they seem to center around 75% of capacity.

This, if anything, looks to be on the conservative side.

The problem is a toughie, of course. You have to figure (1) how much was used from inventory this year, and (2) how active business will be next year. **But if you figure that 9-million to 10-million tons were taken from inventory this year, and that business will average a bit higher in 1955, it's hard to come up with less than an 80%-plus rate.**

Actual ingot output of 85½-million tons now is forecast for 1954 by the magazine Steel. (That, too, may be a little conservative.)

Suppose the draft on inventory this year will be 9-million tons.

Then close to 95-million tons (or operations at 76% of present capacity) would be needed just to keep business going next year at its 1954 average rate. Yet few forecasters see anything but a gradual rise from present business levels, which already have steel up to 80%.

—•—

Manufacturing employment is among the few key figures not likely to set any new 1954 highs before yearend.

Last year, there was a decline of more than half a million factory workers between October and December. That reduced the total almost to 16¾-million at the close of the year.

This year, of course, factory employment will benefit from rising activity. Yet even a rise of 300,000 from October to December (which would be good), would bring the yearend total only to 16.4-million. That wouldn't quite equal January and would be 400,000 under a year ago.

Manufacturing wages will make a more satisfactory yearend comparison than employment. Not only are hourly rates up, but hours worked have been improving gradually ever since April.

Average weekly wages for all manufacturing in December should be $72.50—the best for the year and a few cents higher than a year earlier.

Nonfarm employment (including manufacturing) should rise by half a million between now and Christmas, maybe a bit more. And this could cut unemployment below the 2½-million level.

However, the post-Christmas drop in the number of people working in the trade and service industries will be substantial as always.

As a result, unemployment once again will be making headlines when the January report on the labor force comes out. The total is sure to top 3-million and might even get up to 3½-million.

—•—

And now, with only 23 shopping days left till Christmas, department store business is making a pretty good showing, and is likely to do better. One of the advantages this year is that the comparison is with an ever-so-slightly-disappointing period a year ago.

City stores were averaging, from late October through last week, a dollar volume from 3% to 5% above a year ago.

New York City, often a laggard in recent years, posted a gain for the week ended Nov. 20 of 10%. That brought Gotham's gain for the latest four-week period to 5%, pretty close to the national average.

Contents copyrighted under the general copyright on the Nov. 27, 1954, Issue—Business Week, 330 W. 42nd St., New York, N. Y.



Now mothers get a holiday *on holidays*

This year, Mother doesn't even have to stuff the festive bird. She can buy chicken, turkey and other poultry cleaned, stuffed, ready-to-roast. Just pops it in the oven —unopened package and all! It's a boon to busy housewives that promises a new boom for the poultry business.

A Dewey and Almy product and process — CRYOVAC vacuum-sealed transparent packaging — makes it possible. CRYOVAC packaging is also helping to build sales records for packers of ham, frankfurters, cheese and many other food products.

Similarly, in your business, there may be a merchandising or a cost-saving opportunity that can be realized through use of CRYOVAC packaging or another of the Dewey and Almy products listed below. Would you like one of the Dewey and Almy men in your vicinity to come in and discuss it with you?



D A

DEWEY and ALMY
Chemical Company

Cambridge 40, Massachusetts

Offices or Subsidiaries in principal U. S. cities and in Buenos Aires, Copenhagen, London, Melbourne, Milan, Montevideo, Montreal, Naples, Paris, São Paulo, Tokyo.

Shoe Materials • Sealing Compounds for Food Cans • Resin Adhesives • CRYOVAC bags for Food Packaging • Soda Lime • Flowed-in Gaskets for Industry • Battery Separators • Chemical Products for the Construction Industry • Meteorological Balloons • Textile Printing Products • Organic Chemicals.



FIRST COST can be the LEAST COST if it's the LAST COST

First cost is never the whole story. Length of service and cost of upkeep are equally powerful factors in determining the lifetime cost . . . the *real* cost of an object.

Nor does it have to be something glamorous. Even such everyday things as kitchen garbage containers and work surfaces, mixing bowls and flour sifters, etc., are transformed when they're made of Allegheny Metal. They look better, clean easier, last many times longer. That's because *no other metal* is at once as hard and strong, as resistant to wear and corrosion, as stainless steel. Even where the use of Allegheny Metal results in higher first cost (and quite often it doesn't!) it is sure to cost far less in the long run.

Does that give *you* ideas about adding new sales appeal to your product? Or reducing maintenance, repair and depreciation costs in your equipment? If so, our engineers are ready to help you work them out. ***Allegheny Ludlum Steel Corporation, Oliver Bldg., Pittsburgh 22, Pa.***

Make it BETTER-and LONGER LASTING-with

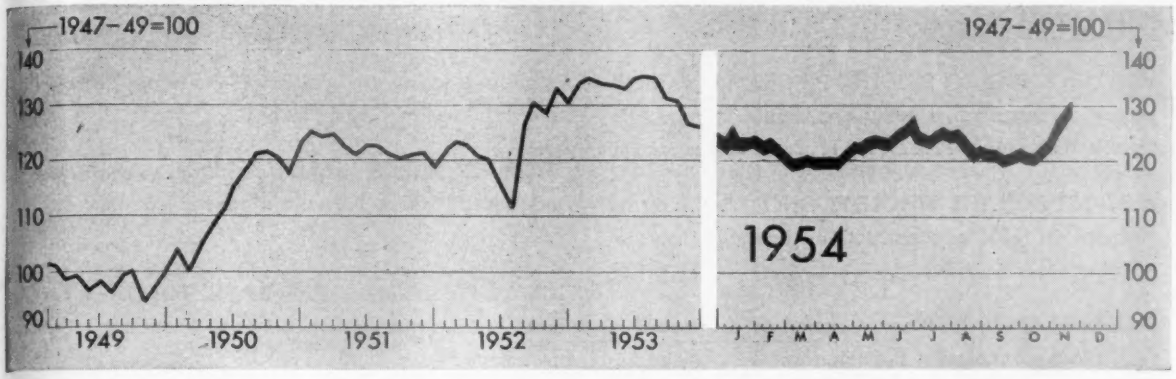
Allegheny Metal

AL® TIME-TESTED STAINLESS STEEL

Warehouse stocks carried by all Ryerson steel plants

WAD 5399

FIGURES OF THE WEEK



	§ Latest Week	Preceding Week	Month Ago	Year Ago	1946 Average
Business Week Index (above)	*130.7	†129.5	122.6	126.6	91.6
PRODUCTION					
Steel ingot production (thousands of tons)	1,890	†1,892	1,776	1,956	1,281
Production of automobiles and trucks	159,931	†141,154	62,376	108,729	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands)	$52,808	$51,332	$41,490	$36,105	$17,083
Electric power output (millions of kilowatt-hours)	9,317	9,197	9,033	8,416	4,238
Crude oil and condensate production (daily av., thousands of bbls.)	††6,265	6,220	6,174	6,259	4,751
Bituminous coal production (daily average, thousands of tons)	1,503	†1,418	1,382	1,549	1,745
Paperboard production (tons)	257,148	258,396	258,055	252,244	167,269
TRADE					
Carloadings: manufactures, misc., and l.c.l. (daily av., thousands of cars)	70	69	71	72	82
Carloadings: raw materials (daily av., thousands of cars)	48	47	49	49	53
Department store sales (change from same week of preceding year)	–2%	+4%	+1%	+2%	+30%
Business failures (Dun and Bradstreet, number)	208	227	229	223	22
PRICES					
Spot commodities, daily index (Moody's Dec. 31, 1931 = 100)	410.6	411.5	405.2	399.1	311.9
Industrial raw materials, daily index (U. S. BLS, 1947-49 = 100)	89.2	89.5	88.7	83.7	††73.2
Foodstuffs, daily index (U. S. BLS, 1947-49 = 100)	92.0	93.7	93.1	93.0	††75.4
Print cloth (spot and nearby, yd.)	18.6¢	18.7¢	19.0¢	18.9¢	17.5¢
Finished steel, index (U. S. BLS, 1947-49 = 100)	144.7	144.7	144.7	141.4	††76.4
Scrap steel composite (Iron Age, ton)	$32.83	$33.83	$33.33	$34.83	$20.27
Copper (electrolytic, Connecticut Valley, E&MJ, lb.)	30.000¢	30.000¢	30.000¢	29.915¢	14.045¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.)	$2.47	$2.42	$2.42	$2.36	$1.97
Cotton, daily price (middling, ten designated markets, lb.)	33.73¢	33.80¢	34.14¢	32.84¢	30.56¢
Wool tops (Boston, lb.)	$2.13	$2.18	$2.23	#	$1.51
FINANCE					
90 stocks, price index (Standard & Poor's)	267.7	266.3	254.4	194.1	135.7
Medium grade corporate bond yield (Baa issues, Moody's)	3.45%	3.45%	3.45%	3.75%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate)	1¼–1⅜%	1¼–1⅜%	1¼–1⅜%	2¼%	¾–1%
BANKING (Millions of dollars)					
Demand deposits adjusted, reporting member banks	N.A.	55,573	55,470	53,697	††45,820
Total loans and investments, reporting member banks	N.A.	84,424	84,675	79,822	††71,916
Commercial and agricultural loans, reporting member banks	N.A.	21,133	21,126	23,377	††9,299
U. S. gov't guaranteed obligations held, reporting member banks	N.A.	37,377	37,403	32,605	††49,879
Total federal reserve credit outstanding	25,933	25,581	25,521	26,487	23,883

MONTHLY FIGURES OF THE WEEK		Latest Month	Preceding Month	Year Ago	1946 Average
New orders for machinery, except electrical (McGraw-Hill, 1950=100)	Oct.	95	95	91	N.A.
Exports (in millions)	September	$1,108	$1,154	$1,256	$812
Imports (in millions)	September	$781	$825	$926	$412

* *Preliminary, week ended Nov. 20, 1954.* †† *Estimate.* *N.A. Not available.*
† *Revised.* # *Insufficient trading to establish a price.* § *Date for "Latest Week" on each series on request.*

in BUSINESS this WEEK . . .

GENERAL BUSINESS:

WHO'S GOING TO SET THE PRICES? GE's new policy on retail price setting falls into an already troubled situation .....p. 25

A BOOST FOR THE WHOLE ECONOMY. The main element in 1955's construction plans is private housing .....p. 27

SLUM CLEARANCE. It's now called urban renewal, with more community participation.....p. 28

ANTITRUST AIMS BOMB AT RCA. Justice Dept. charges "deliberate" monopolizing of radio-TV research and patents.....p. 29

DECISIVE: NEEDS, SALES, YOUTH. What does and doesn't affect industry's capital spending decisions .....p. 30

RUBBER AUCTION'S LAST DAYS. Price is still an issue, but the government's synthetic rubber plants are going, going.....p. 32

Business Briefs .....p. 34

BUSINESS ABROAD:

INDIA, SHORT OF GOALS, WARMS TO U.S. CAPITAL. Without foreign funds, it can't keep up with Red China .....p. 142

GUATEMALA MAPS ITS COURSE. Pres. Castillo tells newsmen how they plan to build up the treasury..p. 146

EXPORT AID. Chase Bank of New York plans new company to advance credit to U.S. producers.....p. 148

CANADA:

MELTING POT OF LABOR: SHOULD THE LID BE PUT ON IT? Some conservatives question continued influx of skilled workers.....p. 166

HIGHER TARIFFS FOR CANADA? National policy argues against industries' demands for more protection from imports .....p. 172

FINANCE:

INVESTORS COUNT ON THE FUTURE. Estimate of next year's construction pushes building shares to new highs .....p. 44

PLENTY OF MONEY . . . for industrial mortgages is available, and supply is growing.....p. 46

END OF A BORDER STOCK PATROL. Ontario quits joint effort with SEC to curb dubious promotions.....p. 48

LABOR:

UAW HITS CHRYSLER WHEN IT HURTS. Two divisions threaten to strike as company struggles in competitive market .....p. 152

CIO SEARCHES ITS SOUL. Its Ethical Practices Committee checks honesty of welfare fund operations.p. 153

LINING UP FOR A FIGHT ON GAW. Auto industry has met UAW's demands with silence.....p. 154

MANAGEMENT:

AMC: NO ONE-MAN SHOW NOW. American Motors introduces a new model in its management organization.....p. 58

A $5,000 JUNKET PUTS SUPPLIER BACK ON THE MAP. Aero Supply holds a plant tour off the beaten track .....p. 68

MARKETING:

WHAT'S LEFT FOR THE SMALLER NETWORKS? The reasons behind the rumor that Du Mont TV might sell out .....p. 114

CONSUMER CONFIDENCE: LOWER THAN 1952, BUT RISING. Survey Research Center paints a bright picture for U. S. business.....p. 124

'55 CARS CUT RATE. Dealers' unorthodox stunts reflect a strong market .....p. 133

THE MARKETS:

PROFIT-TAKING MOVES IN. Post-election price climb has been slowed, but bulls aren't worried.....p. 150

PRODUCTION:

PRE-STRESSED CONCRETE EASES LOAD. It's fast becoming one of the hottest techniques in the building industry .....p. 78

BELL MAKING: OLD CRAFT WITH A MODERN TOUCH. Up-to-the-minute tools and methods are needed for proper pitch.....p. 86

NEW PRODUCTS .....p. 92

RESEARCH:

WHEN RESEARCH BEGAN TO SPRAWL. How Ferro Corp. dealt with problem caused by diversification .....p. 102

"QUANTUM JUMP." Fairchild takes a flier on oft-scorned theory that might increase fuel yields....p. 108

THE SNIFFLES YIELD AN INCH. Industry is asked to finance the new attack on the common cold...p. 112

	Page
Business Outlook	17
Washington Outlook	37
International Outlook	139
Personal Business	159
The Trend	176
Figures of the Week	21
Charts of the Week	162
Local Business	52
Readers Report	8



Photo courtesy Newport News Shipbuilding and Dry Dock Co.

Cupro-nickel tubes help get them there on schedule

Ships need reliable power plants to get them to far off ports of call. And one of the critical spots in a ship's power plant is the condensers.

The metal tubes in these condensers have to be tough. Not only must they withstand pressure and high velocities but they must resist steam on one hand and corrosion from salt water on the other. High heat transfer capacity is a requirement, too.

With so much demanded of a metal, it's not surprising to find nickel at work. For the condenser tubes in most modern ships are 90-10 or 70-30 cupro-nickel. These copper-nickel alloys can take tough service. So, nickel has an important part in bringing ships safely to port.

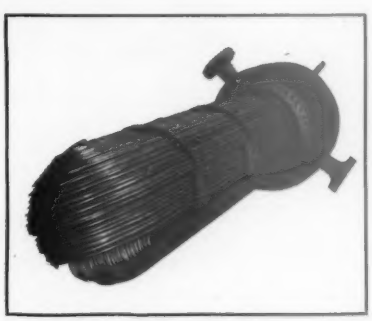
These cupro-nickel alloys are one more example of the way nickel, as an alloying element, imparts to other metals such desirable properties as resistance to corrosion, shock and fatigue, plus strength, hardness and toughness.

NICKEL BRIEFS

Nickel acts as a strengthener to other metals. It improves resistance to corrosion. Copper-nickel alloys, for instance, give outstanding service in heat exchangers, stills, water boxes, piping and tanks. Power plants, sugar mills, oil refineries and scores of other industries utilize cupro-nickel alloys to defeat corrosion.



Designers of the S. S. United States, built by Newport News Shipbuilding, selected cupro-nickel alloys for many important parts of equipment exposed to salt water. From wide experience they know that alloys containing nickel minimize both the risk of breakdowns, and replacement expenses.



Power plants ashore also rely on the corrosion resistance and strength of cupro-nickel for tubing condensers, coolers, and high pressure heat exchangers like this.

Yours for the asking . . . draw on Inco's fund of useful information on the properties, treatment, fabrication and performance of alloys containing nickel. If you have a metal problem, we'd be glad to help.

Write for . . . "List A" of available publications.

INCO TRADE MARK *Nickel Alloys Perform Better, Longer*

THE INTERNATIONAL NICKEL COMPANY, INC. 67 WALL STREET NEW YORK 5, N.Y.

The customer is in...

You know he is. *You telephoned* ahead from your last town for an appointment.



He'll see you...

You know he will. He said so when *you telephoned.*

He's interested...

You know he is. You told him enough *over the telephone* to arouse his interest.

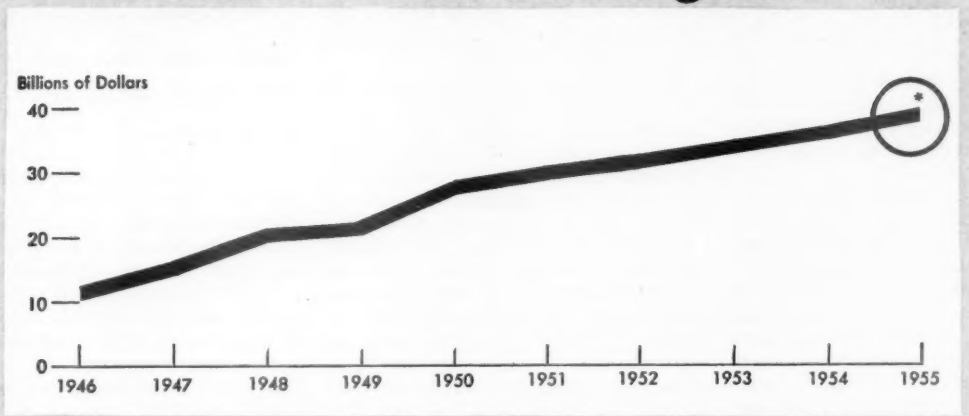
Telephone ahead for appointments—regularly.
Find out for yourself how Long Distance opens doors.
Saves you time and money. Builds your confidence.
Improves your chances of making sales.

LONG DISTANCE DOESN'T COST—IT PAYS

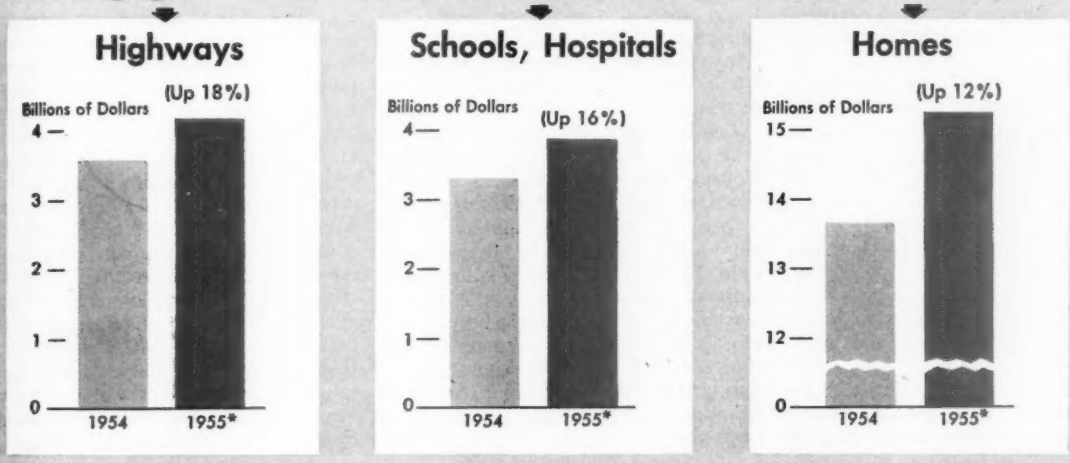
Bell Telephone System

P25/26 copy
NOV 21 56

Construction: It Will Rise Again in 1955



Biggest Gains Will Show Up Here



Data: Dept. of Labor; Dept. of Commerce *Estimated

©BUSINESS WEEK

A Boost for the Whole Economy

Construction is one of the big, basic industries in the U. S. economy. It is directly and indirectly connected with scores of other industries. It is capable of spelling the difference between up and down for the entire economic complex.

As the charts show, this powerful industry is expected to accelerate next year. Total spending for new construction in 1955 is predicted at $39.5-billion–7% above the estimated $37-billion of 1954.

This year's total has been no mean one. By all past standards, it is a boom. It has been a solid floor under business activity, keeping the general business recession shallower than it would have been otherwise. Add 7% to the 1954 construction boom, and put it in a year when no major business setback is foreseen, and you get a picture of very comfortable times.

• **Forecast**—The predictions on which the charts are based came last week from construction economists and statisticians of the federal government. Men in the industry itself disagree only with some of the details. They subscribe heartily to the general tone of the forecast. Said one Northwest lumberman this week: "We can't see anything but good."

The prediction breaks down into two groups of elements:

Up by $3.5-billion: private housing, highways, schools, hospitals, commercial buildings, miscellaneous projects.

Down by $1-billion: industrial plants, farm construction, railroads, public housing, and federal civil works.

I. Houses, Houses

The biggest single element in next year's predicted boom is private housing. Spending for new homes alone will account for more than a third of all construction expenditures, according to the government's seers. And homeowners are expected to spend perhaps an equal amount for repairs and maintenance.

Housing construction has astonished the most bullish of observers. The record for new home starts in a single year was established in 1950, with

1,396,000. This year's total is pegged at some 1.2-million. Next year's is expected to approach the record, with 1.3-million.

In dollars, 1955 homebuilding is figured at $13.7-billion. Additions and alterations—such operations as adding a room or building a porch, which the government figures in with new construction—are expected to add another $1.5-billion.

• **Intangibles**—On top of that, there's another huge category of housing work that isn't tabulated by the government. This is the category of repairs, maintenance, and upkeep—often called the "fixup" category. It includes such jobs as wallpapering a room, sanding down a doorsill, installing a storm window. A sizable amount of this work involves nickel and dime expenditures that are extremely hard to keep track of—even to guess at. But the government's analysts guess the fixup bill for 1955 will be something like $15-billion.

• **Taggers Along**—Near-record homebuilding will have the effect, next year, of pulling many other types of construction up with it. More homes in a community means more stores, office buildings, new schools, churches, hospitals. And it means more roads and streets—one reason for the 18% rise in highway construction forecast for next year.

• **Reasons**—Why is homebuilding going at such a pace? Economists give several reasons.

For one thing, the population is rising. It is also moving about the country constantly.

Then there is the Housing Act of 1954. Effective Aug. 2, it liberalized down-payment requirements—cutting them by percentages ranging from 20% to 52%. This lets people buy homes who were not able to raise the down payment before. It also lets a homeowner move to a bigger house; he gets more house for the same down payment.

II. Building Supplies

If the outlook for construction reads like poetry to contractors, it sounds equally pleasant to the suppliers of building materials. Some 93% of all gypsum made in the U.S. goes into building, together with about 43% of lead production, 13% of steel, and 8% of copper.

A fast-growing market for these products might presage shortages and higher prices next year. But most industry observers say that won't be the case. There is still enough slack between capacity and actual output to prevent major shortages.

There might be spot shortages, as there almost always are with materials that go through jagged seasonal ups and downs in demand. This is particularly likely in the case of cement, which is generally sold pretty close to the spot where it's made. It can't be transported economically from an area of surplus to a far-off area of shortage.

Here's a rundown of the outlook for some principal building materials:

Glass is in short supply right now as a result of sudden high demand during the summer. But with the slack season closing in, glass suppliers expect to get back in tune with demand fairly fast.

Demand for glass has been growing steadily over the past decade and a half. There is a trend toward both residential and business buildings with vast expanses of window. Says one industry spokesman: "The average medium-priced house back in 1940 might have included no more than $50 worth of flat glass. Today, it's common for homes in the same price range to include as much as $1,000 worth."

Gypsum companies are increasing their capacity. Says Pres. Lewis D. Sanderson of National Gypsum Co.: "Any time we get building starts of 1-million or more, it makes for capacity production in the industry."

Lumber suppliers are optimistic about next year. They particularly like the Housing Act, with its down-payment provisions allowing U.S. citizens to buy bigger homes. Bigger homes require more lumber; this should offset a long-term trend toward less lumber, and more of other materials, in a house.

Cement makers expect a busy year—especially when they contemplate an expected 18% rise in highway construction. Many are expanding capacity. One producer started an expansion program this year that will make his capacity one-third bigger by 1956.

III. Along for the Ride

Build a house, and you create a potential market for all kinds of goods and services not allied with construction. The family that moves into the house will probably buy furniture, rugs, curtains. It will probably install a washing machine. In the basement, a workshop replete with tools will grow up.

What's more, fewer of these products today are being left to haphazard buying. They are being sold with the house, in a single package. A house today is likely to come equipped with all kinds of appliances, perhaps even with furniture. Builders are doing their best to make the package attractive to househunters.

The manufacturers of these extra items—particularly appliance makers—are giving more and more attention to the market represented by this trend to home packages. Some appliance men are said to be considering lines designed especially for sale to builders.

Slum Clearance

It's now called urban renewal, and the new housing law injects more private participation.

The Administration's change of emphasis in city housing aid is beginning to take hold this week. Clarksville, Tenn. (population 16,000-plus) becomes the first city to launch a program of rehabilitation for blighted areas under the housing law that Pres. Eisenhower signed last August.

Housing chief Albert M. Cole has three other applications on his desk—from Lewisburg, Tenn.; New Orleans, La., and Somerville, Mass.—and at least 80 other cities are working to qualify for aid under the new law.

Both the emphasis and the terminology of the Administration's program are new. "Slum clearance" through a scattering of public housing projects has been changed to "urban renewal" through private enterprise and community-wide public programs. Housing officials think the new program will be a more effective attack on the urban decay that goes along with—and helps to spur—the move to the suburbs.

• **Changes Made**—The new law doesn't interfere with the more than 250 slum clearance and redevelopment projects already operating under the 1949 housing law. The 200 municipalities that sponsor these projects can continue under the old law or convert to meet the new law. New applications must conform with the new law.

For municipalities, the chief difference is that under the new law each city must convince the Housing & Home Finance Agency that it has a "workable program." Subject to allowances for special circumstances, HHFA defines this term as including:

• Codes and ordinances that prescribe minimum standards of housing, health, fire prevention, building, plumbing, electrical, and sanitation.

• A comprehensive general plan for the community including, as a bare minimum, a land-use plan, a thoroughfare plan, and a zoning ordinance.

• Studies leading toward demarcation of residential neighborhoods that can be made desirable by rebuilding existing properties or razing them for redevelopment.

• Administrative authority to enforce codes and ordinances and to carry out and finance renewal programs.

• Plans for rehousing displaced families in safe and sanitary quarters.

• Sufficient community-wide participation by individuals and citizen

groups to assure continued support of the urban renewal idea.

• **What They Get**—Cities that qualify under these new standards are eligible for federal aid to produce predominantly residential developments out of either residential or nonresidential slums. They can draw upon these federal funds:

• A $1-billion revolving fund for temporary loans for planning and other preliminary expenses.

• A $500-million fund out of which the federal government grants two-thirds of a city's net cost of razing run-down buildings and preparing the site for resale to a developer.

Already, $375-million of the latter fund under the 1949 law has been earmarked for projects under way. Pres. Eisenhower will ask Congress in January for another $500-million or more to replenish this fund.

• **Private Enterprise**—The new housing law also offers liberalized FHA-insured mortgages for private development of property in city areas that are threatened by decay—even if the city has not adopted a "workable program." Private enterprise also comes into the picture with the requirement that cleared areas in city projects be sold to private developers.

Congress authorized only 35,000 starts in public housing, restricted to low-income families who are displaced by government programs (BW—Jul.31 '54,p32). With the Democrats in charge, Congress may boost this figure for next year.

• **Stronger Hand**—A long-awaited Supreme Court decision this week strengthened the hand of slum clearance authorities. By unanimous decision, the court upheld the right of municipal authorities, under proper legislation, to condemn whole areas—even a modern store like the one in the test case brought by a Washington, D. C., merchant—in order to make communities more beautiful and better planned. The court also ruled that property that is later turned over to private interests is still being seized in such cases for public purposes—and thus is subject to the right of eminent domain.

With clear legal backing and with ample funds for the government's share of cost, HHFA officials are raising their estimates of the urban renewal potential. James W. Follin, who heads the agency's urban redevelopment division, now calculates a public cost of $15-billion for slum clearance in the years ahead ($3,000 per unit for 5-million dwelling units that are beyond repair) and another $9-billion for rehabilitation of about 15-million dwelling units. Construction spending by private investors hasn't even been guessed at, but it would surely be an even greater amount than the public outlay.

Antitrust Aims Bomb at RCA

Justice Dept. files suit charging "deliberate policy" of monopolizing radio-TV research and patents. RCA says its patents licensing policies have helped industry grow.

The Justice Dept.'s antitrusters dropped a bombshell last week in the $1½-billion-a-year electronics industry—a monopoly suit against the Radio Corp. of America.

RCA, the giant in its field, is the biggest seller of most radio and television products. Through its subsidiary, National Broadcasting Co., Inc., RCA broadcasts radio and TV programs to more than 180 radio stations and 63 television stations. RCA owns or controls the rights to about 10,000 patents in the radio-TV field, and reaps annual royalties of over $20-million.

It is this last phase of RCA's activities that is now under attack by the government. The suit filed in New York charges that since 1932, RCA has followed a deliberate policy of monopolizing radio-TV research, patents and patent rights, and the issuance and exchange of radio-TV patent licenses.

• **Aim**—The government's avowed objective is to break the strangle hold it claims RCA has on competitive research and invention in the radio and TV field.

But if a court decides RCA has violated the law, no one knows just how far the government will go in spelling out the details of the relief required. It could, some say, go as far as calling for dedication to the public of hundreds of RCA patents, as was done last year in a case where the court ruled that General Electric Co. had monopolized the incandescent lamp industry by illegal use of patents and licensing agreements (BW—Oct.10'53,p34).

• **Revival**—The government's complaint lists as "co-conspirators" the General Electric Co.; American Telephone & Telegraph Co., and its subsidiaries Western Electric Co., Inc., and Bell Telephone Laboratories, Inc.; and Westinghouse Electric Corp. These are the same companies involved in a monopoly case brought in 1930.

That case was settled by a consent decree in 1932, which required divestment by GE and Westinghouse of stock control of RCA. GE, Westinghouse, and AT&T also agreed that exchange of patent licenses with RCA was not to give RCA exclusive licensing rights.

Trustbuster Thurman Arnold tried vainly in 1942 to reopen this decree.

In effect, the new case filed against RCA takes up where Arnold left off. It charges that RCA and the other companies, after the consent decree in 1932, effectively washed out its terms, and actually gave RCA the radio-TV patent licensing business free of any stiff research competition.

• **Target**—The real target, though, of the monopoly suit is RCA's so-called "package licensing" policy.

RCA classifies its patent licenses into four groups: radio and TV receivers; commercial radio apparatus; receiving tubes (such as TV picture tubes); and transmitting and power tubes.

In order to make a radio or TV receiver using any RCA patent, for example, the government says a manufacturer wanting to use only one or two patents has to accept a license giving access to all ten thousand—but for use only in the one group (in this case, for making receivers). He must pay RCA a royalty of 1¼% to 4% on the manufacturer's selling price of the completed receiver.

According to the government, anyone trying to "invent around RCA" never really knows which RCA patent is involved.

The government contends that RCA can keep an alleged patent infringer tied up in court litigation indefinitely, simply by charging one or another of its 10,000 patents has been infringed. They cite a still pending infringement suit against Zenith Radio Corp. and Rauland Corp. This case also involves suits by Zenith and Rauland against RCA; the U. S. Appeals Court in Chicago last week authorized Zenith and Rauland to proceed with a $16-million damage suit.

• **Reply**—RCA came back at the Justice Dept. suit with a statement that, far from seeking monopoly, it has followed a "liberal licensing policy of making its inventions available to all"—and that it does not acquire nor grant exclusive patent licenses. Its policy, RCA said, has resulted in making the radio-TV industry the "fastest growing and most competitive in America." RCA also pointed out that, besides the 1932 consent decree, the agreements under attack were upheld by the courts in 1942 and again in 1954.

• **Demands**—The government is asking right now for a ruling that RCA has monopolized the radio-TV patent licensing business. Then it wants the package licensing agreements in effect declared illegal, and patent exchange agreements between RCA and the "co-conspirators" canceled. Later it wants specific relief relating to RCA patents and knowhow.

Capital Spending:

What does-and doesn't-affect decisions of companies

Look at a group of companies, all of which are spending more next year	Look at another group of companies that are spending less	Here is what affected their decisions
58% of these . . .	**0%** of these . . .	. . . have had higher sales this year
50%	**0%**	. . . have had higher profits this year
56%	**100%**	. . . have more capacity than they need
58%	**25%**	. . . are undergoing rapid technical changes in products or manufacturing processes.
EXPECTATIONS		
67% of these . . .	**75%** of these . . .	. . . expect their sales will go up next year
67%	**75%**	. . . expect their profits will go up next year
83%	**25%**	. . . expect profit margins will be satisfactory next year
100%	**88%**	. . . expect money will be easy to get
OPINIONS		
25% of these . . .	**12%** of these . . .	. . . find the current political situation favorable
75%	**25%**	. . . believe they will benefit from the 1954 tax law
STYLE OF MANAGEMENT		
33% of these . .	**50%** of these . . .	. . . are dominated by one or two men who make the important decisions
67%	**50%**	. . . have a management team which participates in decision making
25%	**75%**	. . . have family or old-employee managements
75%	**25%**	. . . have young managements or executives new to the company

Decisive: Needs, Sales, Youth

Here is some light on why companies invest their money or decide not to.

The decision to invest or not to invest capital, almost anyone would agree, is about the most crucial any company makes—crucial for its own fortunes, crucial for the health of the economy.

But what enters into the decision? What makes one company decide to expand its plant, another decide not to? Economists have tried to relate capital spending to levels of sales or to the cost of money or to tax rates. Lately, psychologists have argued that the expectations, the optimism or pessimism in the minds of responsible businessmen, may be a conclusive factor. Information is is still fragmentary.

• **Experiment**—The tabulation above summarizes the results of a preliminary and tentative experiment aimed toward answering these questions. The experiment: to investigate the situation and the management attitudes of a group of companies that have just expanded the capital spending and also of another group who have just cut it back. The factors common to both groups, it would seem, are unlikely to be important influences on spending. Those in which the two groups differ markedly may well have something to do with spending decisions.

• **Results**—In general the results support the economists more than the psychologists; firm facts on the company books seem to make more difference than expectations or attitudes. But there are some significant cross currents.

Most companies that plan to increase capital spending next year have had a good year for profits and sales, expect another good record in 1955, are faced with technological changes in products and processes, and have a young or new management.

The companies that plan to cut capital spending next year have had a poor sales and profits record, expect some improvement but fear a pinch on profit margins, are oversupplied with plant already, and have an old or family-controlled management.

Such factors as the political outlook and ease of credit seem to mean relatively little.

• **Sampling**—That's the picture BUSINESS WEEK reporters got when they interviewed a sample of the companies participating in the latest McGraw-Hill survey of capital spending plans (BW—Nov.6'54,p30). The McGraw-Hill Dept of Economics, which conducts the annual survey, selected a list of companies whose plans for 1955 show substantial changes in capital spending—either up or down.

The BUSINESS WEEK reporters who made the survey did not have the capital spending figures, which are reported to McGraw-Hill in strict confidence, nor did they know which companies will spend more, which less. Furthermore, they did not ask the companies direct questions concerning capital spending plans or the reasons behind those plans. Instead they asked a series of questions aimed at determining the attitudes, expectations, and situation obtaining in each company at about the time the spending decision was made.

• **Medium-size Class**—The companies interviewed are all in the medium-size class. Reporters talked with the key people, the executives who form the company's attitude and set its course. One essential element in the survey, therefore, was to locate the key people—sometimes a single man, more often a team of like-minded executives.

The results went back to McGraw-Hill's Dept. of Economics for correlation with the earlier reports of spending plans. The sample was a small one. It can't be taken as conclusive. But it does give some indication that spending in the medium-sized company is no seat-of-the-pants operation, based on feel of the market, unmeasurable hopes and fears, or other intangibles.

Here's what the survey indicates is important:

I. Company Statistics

The trend in sales and profits is a decisive consideration. The trend was up for a majority of the companies that planned to boost expenditures. It was down for all those who will cut.

• **Capacity**—Another known fact is plant capacity. All of the "down" companies have more production capacity than they need to meet demands, many have far too much, and some expect this situation to remain unchanged for some time. A small majority of the "up" companies also said they have too much capacity, but it didn't seem to be so important in their thinking. Probably the main reason is that more than half of these companies are faced with rapid technological change that makes facilities obsolete. These companies are introducing radically new products or new processes, whereas only one out of four "down" companies had such modifications in mind.

II. Expectations

What the companies see in the crystal ball on sales and profits for 1955 doesn't seem to be very different for companies raising or cutting expenditures.

It's hardly a statistically significant difference, but more "down" companies expect sales and profits to improve than do "up" companies. Perhaps this is to be expected. All of the "down" companies had an off-year in 1954; some are losing money. While they see somewhat better sales ahead, the fact that most of them don't expect satisfactory profit margins indicates that they think they still won't be out of the woods in 1955.

There was one interesting fact, however. Three companies, with lower sales this year, are going to spend less on capital goods next year—but say they will increase their expenditures again in 1956.

• **Margins**—The most significant results under the "expectations" heading are in profit margins. Almost all the "up" companies expect to make a relatively good margin of profit on next year's sales. They expect, in other words, that any new investment will pay out. Very few of the "down" companies expect to have satisfactory profit margins, even if sales go up.

• **Credit**—Apparently money (the borrowed kind) is no object. Nearly every company expects it to continue to be easy in 1955. Most of the companies that showed a real interest in bank money were those that are expanding so rapidly that they are short of cash. Companies that are reducing capital expenditures found the money market of little interest.

III. Opinions

Politics was of surprisingly little interest to any of the companies, so far as their business decisions were concerned. The interviews were conducted in the heat of the election, but very few executives thought their business would be affected.

By the same token, the long-range outlook for general business didn't play a controlling part in decisions, nor did the stock market or other factors that are not related to near-term business operations.

• **Optimism**—All of the managers had a "feeling" about the economy. Generally, it could be summed up like this: "1955 will be as good as 1954 or better." An attitude of stability prevailed. But this attitude can hardly be called a motivating factor behind spending decisions, because all of the companies have it—both those that will cut spending and those that will increase it.

The new tax law makes a difference to 75% of the companies that are stepping up their expansion. But only 25% of those that are cutting see any benefits in the new law. In most instances, the "ups" cited the new depreciation benefits as a reason for further capital investment.

IV. Management Style

Companies that are cutting investment include a large majority where the company is managed by family owners or by executives who have been with the firm for many years. Of the companies that are increasing investment, 75% are managed by young men or by professional managers recently brought in from outside.

A few of these younger or professional managements plan to cut expenditures in 1955, but two out of three of them intend to boost spending again in 1956.

Most of the newer managements operate as a team, but here the differences with one-man managements approached statistical insignificance. Some companies dominated by one man have aggressive investment programs. And team decisions were almost as likely to go against spending as in favor of it.



COMMISSION headed by Holman Pettibone (second from left) has the job of selling a $300-million-a-year industry. Things are moving fast, for these are the . . .

Rubber Auction's Last Days

There's only a little time left for negotiations on the synthetic rubber plants the government wants to sell. Here is how the sale stands this week.

Dec. 27, exactly a month from now, is an important deadline to many men in the rubber, chemical, and petroleum industries. It is the last day of a gigantic auction being run by the U. S. government—the sale to private buyers of the government-owned $300-million-a-year synthetic rubber industry (BW—Oct. 2'54,p30).

Last week in New York, Chairman Holman Pettibone of the Rubber Producing Facilities Disposal Commission told interested listeners how the auction is coming. He did not talk in specific terms, but his listeners went away from the meeting with two fairly distinct impressions:

• Negotiations are still in a fluid, somewhat turbulent state. Bids are still being changed. Arguments are still going on between the government and the corporate bidders. In the words of Pettibone's fellow commissioner, Leslie Rounds (picture, second from right), "If this meeting had been two weeks later, we might have had a lot more to report."

• But the commission expects to meet the deadline. Negotiations on a few of the synthetic plants are beginning to firm up. As the deadline draws nearer, the auction will move faster; seller and buyers will probably be more willing to compromise than they were in earlier negotiations.

• **Rules**—The industry on the auction block consists of 26 major plants, and represents a government monopoly of the synthetic rubber producing business. In voting to get the government out of the business, Congress set up four main rules by which the plants should be sold to private buyers:

• The industry, in private hands, must be competitive.

• The government must get full, fair value for the plants.

• Small business must be assured a supply of synthetic rubber.

• There must be adequate rubber capacity in case of war.

The bidding companies, on the other hand, have one equally specific rule of their own: Their investments in the industry must be profitable. In acting as intermediary between Congress and the bidders, Pettibone's commission has found that the companies' rule sometimes clashes with the other four.

For instance, the government's idea of full, fair value differs in many cases from the companies' idea. Pettibone says there are still "wide divergencies" between bid and asking prices on some plants.

The capacity-for-war rule has also made many bidders unhappy. The proposed contract sent to every bidder contains a clause requiring him either (1) to keep the plant operating at its annual capacity for 10 years after the sale, or (2) to arrange operations so that the plant can be brought back to that capacity on six months' notice. If the government finds that this clause is being violated, it can take over the plant and make things right—at the company's expense.

The rule requiring the industry to be competitive is giving some trouble, too. The government built the synthetic rubber industry to operate as an efficient monopoly. The act of breaking it up, many observers feel, will automatically lower each plant's efficiency.

• **Takers**—Yet despite these difficulties, there are bidders at the auction. Big tire and rubber companies need synthetic rubber; it makes up 45% to 60% of their basic raw material. Petroleum and chemical companies are interested, too; they would like to get into the business of making the materials that go into synthetic.

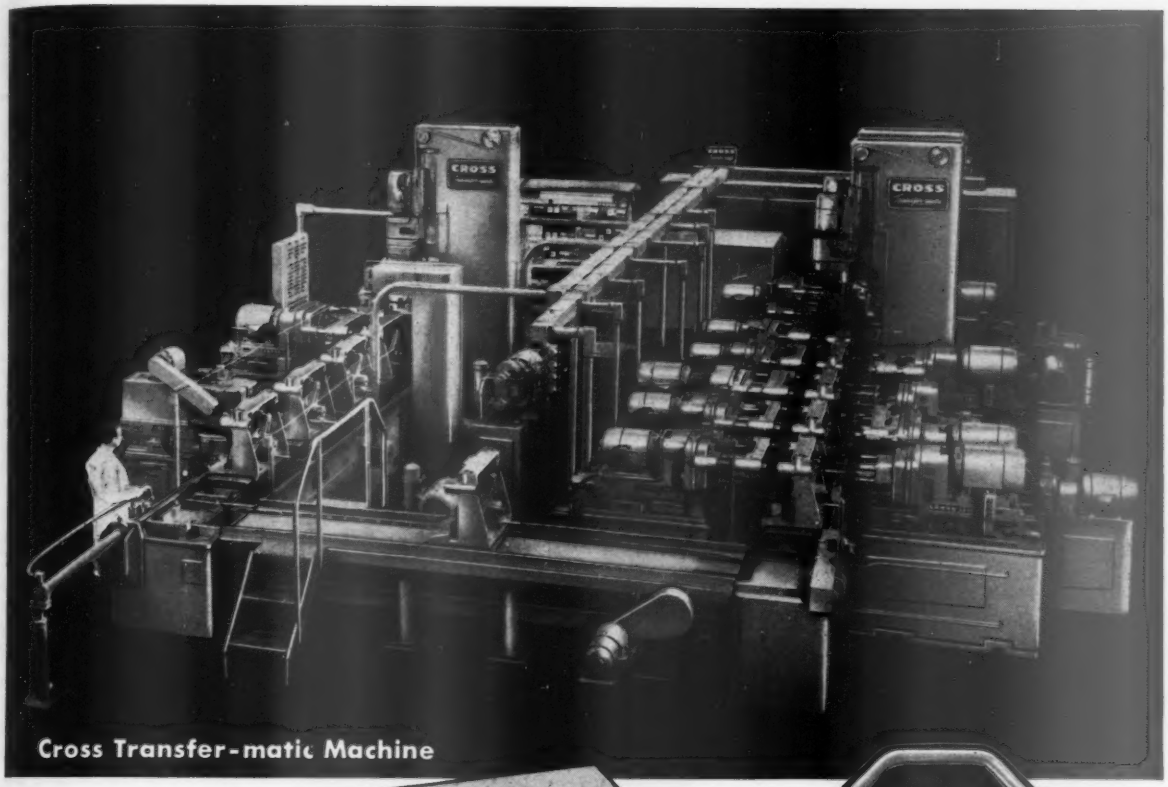
According to Pettibone, some companies are close enough to meeting the government's prices that the commission is drawing up final contracts for signature. Trade rumors name four companies as being on the point of signing: (1) Goodrich-Gulf Chemicals, Inc., joint subsidiary of B. F. Goodrich Co. and Gulf Oil Corp.; (2) Copolymer Corp., a venture of Sears, Roebuck & Co. and six tire companies; (3) Shell Chemical Corp.; and (4) American Synthetic Rubber Corp., joint venture of 29 rubber-using companies.

• **Another Hurdle**—The disposal commission's job is to get all the final bids together by next month. It will then have until Jan. 27 to submit a report on the proceedings to Congress. In Congress, the auction will face more difficulties.

Congress may veto any or all of the sales proposed in the commission's report. In addition, government antitrusters will send Congress an opinion on the report, and this opinion might have disapproving remarks to make about some of the sales. Furthermore, if any one of the sales is vetoed, all other bidders may withdraw.

Hardly any Washington observer is willing to juggle all these variables and come up with a prediction of the auction's journey in Congress. The commission's disposal plan will almost certainly draw some "no" votes, particularly from Democrats who have labeled the entire operation a giveaway. With the Democrats next year stronger in both houses of Congress as a result of this month's elections, the negative votes may be more numerous than they might have been this year.

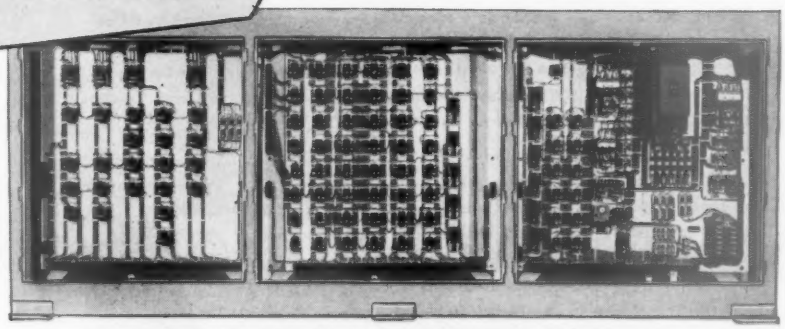
It's true that congressmen who have been against the auction from the beginning are a fairly small minority. But theirs will not necessarily be the only negative votes. There may be many congressmen who agree with the general idea of selling the synthetic plants, but who won't agree with the disposal commission's particular plan for doing so.



Cross Transfer-matic Machine

FACTORY EQUIPPED with ALLEN-BRADLEY Solenoid Control

A-B Quality



Panel showing the Allen-Bradley controls which operate the Cross Transfer-matic Machine

This complex Cross Transfer-matic Machine is operated by Allen-Bradley control. There is a reason!

The very simplicity of Allen-Bradley solenoid control—only ONE moving part—is a reliable guarantee for millions of trouble free operations. Also, Allen-Bradley solenoid controls have double break, silver alloy contacts which require no cleaning, filing, or dressing — resulting in a saving in maintenance or "down" time. Motors, too, are safe with the reliable overload relays that are an integral part of all Allen-Bradley starters.

Specify "Allen-Bradley control" when buying motors or motor driven machinery—you can't make a mistake!

Allen-Bradley Co.
1332 S. Second St., Milwaukee 4, Wis.
In Canada
Allen-Bradley Canada Limited
Galt, Ont.

ALLEN-BRADLEY

SOLENOID MOTOR CONTROL

Quality



Coolite, Heat Absorbing and Glare Reducing Glass combines beauty and utility in an exciting new variety of industrial architecture for H. J. Heinz Co. Ezra Stoller Photos.

●

Skidmore, Owings & Merrill, Architects and Engineers; Gordon Bunshaft, Partner In Charge. Jaros, Baum & Bolles, Mechanical Engineers. George A. Fuller, General Contractor and Lloyd B. Knutsen, Project Manager for the H. J. Heinz Company.

Mississippi Product is "Pick of Pack" at New Plant

The striking exterior of the new, Heinz vinegar plant, Pittsburgh, Pa., executed in a shimmering sweep of Coolite, Heat Absorbing and Glare Reducing glass, has already been acclaimed "a brilliantly incisive piece of architecture." The beauty and drama of this modern concept is immediately apparent . . . fit perfectly the Heinz tradition of highest quality materials and workmanship. The advantages of Coolite to the plant interior are as important as exterior beauty . . . employes work comfortably in areas completely daylighted with Coolite-conditioned light . . . light without harmful glare or excessive solar heat.

For Coolite filters out unwanted factors in "raw sunlight" . . . helps keep plant interiors cooler, brighter, more comfortable . . . reduces necessity for makeshift screens or painting. Employees see better, feel better, work better in interiors daylighted by Coolite, Heat Absorbing and Glare Reducing glass.

Coolite can make your plant a better place to work in . . . boost efficiency . . . reduce rejects. If you are planning new construction or modernization it will profit you to consider Coolite. Available from distributors of quality glass everywhere.



Write today for new catalog, "Coolite, Heat Absorbing Glare Reducing Glass." Samples on request.

MISSISSIPPI *Glass* COMPANY

88 ANGELICA ST. SAINT LOUIS 7, MO.

NEW YORK • CHICAGO • FULLERTON, CALIF.

WORLD'S LARGEST MANUFACTURER OF ROLLED FIGURED AND WIRED GLASS

BUSINESS BRIEFS

Merger agreement was reached by Textron, Inc., American Woolen Co., and Robbins Mills, Inc., directors. The new name: Textron American, Inc. The plan came after months of financial and legal haggling over the fate of American Woolen (BW—Mar.27'54,p50), stockholders of all classes of stock must approve the merger by a two-thirds vote.

●

First direct attack by a man in the tobacco industry on the American Cancer Society came from E. A. Darr, president of R. J. Reynolds Tobacco Co. In a speech this week he charged ACS (1) has not a "single shred of evidence" to tie lung cancer to cigarettes and (2) that in attacking the industry, it is "putting all its eggs in one basket." ACS replied that it "never said cigaretts were solely responsible" and that its statistical investigation implicating cigarettes puts ACS in a "large and growing company" of researchers.

●

Department store anger at the discount houses is hardening (BW—Sep.11'54, p170). This week John Shillito Co., the Cincinnati outlet of Federated Department Stores, cut some prices below the "fair trade" minimums established by manufacturers. Federated's headquarters said that the 34-store chain would press its price cutting drive on a selective case-by-case basis.

●

U. S. shipbuilding last week got a boost under the new government aid program. The Maritime Administration signed a contract by which Cities Service will build three $8-million super tankers, and turn in seven old ones to the Reserve Fleet. The deal will cost the government $4.8-million; the ships will be built by Bethlehem Steel at Sparrows Point.

●

Sale of Illinois Terminal RR to eight major roads has been O.K.'d by ITR stockholders. The $20-million-plus price, after debts are deducted, should give the holders around $16.50 per share. The deal still needs approval by the Interstate Commerce Commission.

●

Grossman Enterprises, of Quincy, Mass., has agreed to buy the Sanford (Me.) property of Goodall-Sanford, Inc., the big textile house now controlled by Burlington Mills. Grossman plans to get new industries to take over three of the Sanford plants and will lease the fourth back to Goodall-Sanford. The deal, set for Dec. 2, needs approval of Goodall-Sanford stockholders.

where else can you find such a success record



There is much evidence to show that the Lower Wabash River Valley is the fastest growing manufacturing area in the country.

And it is easy to understand why this has happened. For example, there is no question about fuel; it is a leading coal producing area and most of the major gas lines cross the area. Electric power? Of the more than 40 generating stations located here, two are among the world's largest. Labor? The area has a population of 2½ million. Transportation? It is the hub of a 9000-mile inland waterway system—it is served by over 20 major railroads and has well maintained highways. Chemicals? There is abundant fluorspar, high calcium limestone, dolomite, rock asphalt, phosphate rock and barite to name just a few mineral materials. And, many other raw materials are in or near this area located between supplies and markets.

Write for this new *INDUSTRIAL FORE-SITE Guide

This fact-filled book of more than 400 pages is a comprehensive economic study of the Lower Wabash River Valley. Contents include a geologic map and cross sections—maps of inland waterways and major railroads—freight schedules—power supply details and electric rate charts—locations and sizes of gas lines—the water supply for specific towns—crop and livestock production by counties—forests and timber resources—population characteristics—types, locations and sales of wholesalers and retailers—plus a full description of each of the 20 major industry groups.

You or your consulting firm may obtain a copy of "Industrial Potentialities of the Lower Wabash River Valley" by writing to:



***INDUSTRIAL FORE-SITE**

—a shrewd management quality that gets the jump on competition by choosing plant sites with superior economic advantages.

C&EI

Chief Economist,

CHICAGO & EASTERN ILLINOIS RAILROAD

332 South Michigan Avenue, Chicago 4, Illinois



HOW HARD LUCK GAVE JOHN A NEW START IN LIFE

As a youngster, John M. had an "ingrown" personality. Didn't mix with the people around him. Didn't talk much. Lived in his own world. When at 18, on his first job, an accident mutilated the fingers on his right hand — his psychological problem was greatly complicated.

When a Liberty Mutual Rehabilitation nurse visited him at the hospital she found a dangerously depressed young man. John didn't want to be helped. He didn't want to help himself. It took several visits and a great deal of persuasion before he would agree to come to the Liberty Mutual Rehabilitation Center in Boston.

But at the Center, John refused to shake off his depression. "What could *I* do?" he asked, when his future career was mentioned. The report on him read: "Patient only wishes to stay home and sleep."

The Rehabilitation people didn't give up. They made his work schedule even more strenuous. Kept at him until his physical restoration was completed. Then came the most important step of all.

A series of aptitude tests were arranged. His excellent score surprised everyone — especially John. He entered a business college for a two-year course — with his first real goal in life. Next thing we knew, John was receiving his diploma — one of the top men in his class.

Today he's bookkeeper for a big company — a valued employee. Making his own way. Capable. Self-confident. Friendly. Happy.

Rehabilitating injured workers like John, making them emotionally as well as physically capable of taking care of themselves, is just one phase of Humanics. Humanics is a Liberty Mutual program that saves money for any employer. For information, call Liberty Mutual. Or write us at 175 Berkeley Street, Boston 17, Mass.

LIBERTY MUTUAL
INSURANCE COMPANY
HOME OFFICE: BOSTON

We work to keep you safe

Denise Hill Collection

WASHINGTON OUTLOOK

WASHINGTON
BUREAU
NOV. 27, 1954



A BUSINESS WEEK
SERVICE

There's a change coming on government spending—the total outlay for goods and services by the federal, state, and local governments. The total has been declining—on balance—since the spring of 1953, when the Korean War peak was hit. The sliding-off in federal spending more than offset rises at state and local levels.

The downtrend will come to a halt—the prospect is—within another 12 months; an upturn will set in then.

Cuts in federal spending will be more than offset by rises in spending by states and other government units. This can be a major business factor in the months ahead—can put extra steam in the business upswing so many experts are forecasting.

—•—

There'll be new clues to the trend in January when the new Congress meets and legislatures in most states convene again.

Watch for Pres. Eisenhower's new budget, covering fiscal 1955, the 12 months starting next July 1.

Another cut is expected. It will be the smallest yet recommended by Eisenhower—probably no more than $3-billion, compared with nearly $4-billion this year and nearly $7-billion the previous year.

But the cut will be partially offset by public works rises, mainly roads, which Eisenhower hopes to finance outside his regular budget.

—•—

State and local budgets are expected to jump. In 1953's second quarter, this spending was down to an annual rate of $24.4-billion—a result of Korea's pinch on materials. In this year's third quarter, state and local governments spent at an annual rate of $27.7-billion—a gain of $3.3-billion.

The big increase expected is in highway building. At present, the total outlay in this field—federal and local—is nearly $5-billion. Eisenhower's plan is to double this rate (BW—Nov.20'54,p26), with about half of the extra coming from federal funds, with state and local governments putting up the remainder. This will be a hot issue in the state legislatures.

—•—

Business implications are pretty clear. If the economy is starting out on a new and sustained rise, even an end to the decline in government demand would be on the stimulating side. And an upturn would put new support under both wages and prices. So, it's a situation well worth watching.

—•—

The highway program will go to Eisenhower in December. The plan now is to include proposals to Congress in the State of the Union Message, due early in January, then follow up with a special message.

The states are lining up behind the scheme.

The hitch is financing. If the extra money for roads is supplied in the usual way, it will up the budget and be reflected in bigger deficits. The plan is to set up a special corporation, which would sell securities guaranteed by the Treasury to raise the road money. This way, the spending would be outside the budget and thus would not add to the deficit. There's sure to be a political fight on this. The Democrats have been skeptical of GOP budget-balancing goals right from the start. And they won't be in any mood to help them along with "bookkeeping" schemes.

—•—

Other programs are firming up. During the next several months, the

WASHINGTON BUREAU
NOV. 27, 1954

President will get a stream of reports from Cabinet committees and special commissions. Some of these will provide the backdrop for recommendations to Congress. Many will turn out to be hot political issues.

—•—

The Hoover Commission will provoke controversy. Its original study of the government centered on ways and means of improving efficiency. Surveys now under way will go into government functions, the basic issue of what government should and should not do.

Cuts in government business ventures will be proposed. The Democrats will use these proposals to reinforce their "giveaway" issue.

Transportation: A Cabinet committee will report to Eisenhower shortly on such things as shipping subsidies, airport construction, etc., and may propose a Cabinet post for transportation—a regular department.

Fuels policy: Another Cabinet group is expected to come up with proposals on whether independent natural gas producers should remain subject to federal price regulation; what help, if any, coal should get; and on the problem oil imports create for independent producers.

Antitrust: A special Attorney General's committee is weighing such things as revision of the Robinson-Patman Act withdrawal of antitrust exemptions for labor unions and farm co-ops, and easing the antimerger law.

—•—

Mine-subsidy bills will come in for serious debate in the new Congress, especially if price-support stockpiling ends in June. Sen. James Murray of Montana is the Democrat who will head the Senate Interior Committee. His counterpart on the House side will be Rep. Gracie Pfost of Idaho. Both supported "mine-incentive payments" bills in the past. Now, they will be in position to get committee consideration.

—•—

Note the new NLRB ruling on wage bargaining. If you turn down demands on the grounds your company can't afford to pay, then the unions can take a look at your books. That's the gist of it.

The way around it, according to labor relations lawyers, is simply to turn down wage demands on other grounds than inability to pay. That way, you can't be made to produce your books and records. The decision came as a surprise and will make for new friction in bargaining.

—•—

Eisenhower's economic report to Congress in January will be optimistic. It's being put together now by the Council of Economic Advisers, under the direction of Chmn. Arthur Burns. It will develop the idea that a $500-billion economy (talked of by Eisenhower during the campaign) can be attained over the next 10 years. And it will lay out, in general terms, the policy government should follow in helping assure this growth.

—•—

Growth trends of the past 25 years are detailed in a report released this week by the Commerce Dept. It goes back to 1929, and traces the economic ups and down since then in a factual way, without political flavoring. The rise for the period averaged 3% a year.

You may find the report useful in making long range plans. You can get a copy or copies by writing: Supt. of Documents, Government Printing Office, Washington 25, D. C. The price: $1.50 per copy.

Contents copyrighted under the general copyright on the Nov. 27, 1954, Issue—Business Week, 330 W. 42nd St., New York, N. Y.

(Advertisem
FROM



"OIL IS W
pot is surv
with a seis

BI
tha

Five p
the
makes

Venturing
exciting ch
to keep ab

Here, a
a picture-
American

SEAGOIN
the Gulf of
from an im
been drilled

(*Advertisement*)

FROM SEARCH TO RESEARCH...



"OIL IS WHERE YOU FIND IT"... this Pure Oil geologist is surveying knee deep in a Louisiana swamp—working with a seismograph crew to pinpoint a potential new field.

BIG OIL STORY
that grows and grows

Five picture pages from Pure Oil reveal the vast variety of enterprise that makes petroleum so great—so growing

Venturing forward on five frontiers, oil keeps writing *new* exciting chapters to its already tremendous story—racing to keep abreast of the nation's progress.

Here, and on the following pages, Pure Oil brings you a picture-sampling of this exciting story of modern American enterprise.

SEAGOING OIL WELLS... out in the open waters of the Gulf of Mexico Pure Oil is bringing up oil and gas today from as much as 2 miles below. As many as 19 wells have been drilled at different angles from a single platform like this.





"MODEL BUILDER"... Laboratory "models"—such as these two-story-high distillation columns—help scientists at Pure Oil's modern Research and Product Development Laboratories get a precise preview of processes for the development of new products and the improvement of present products.

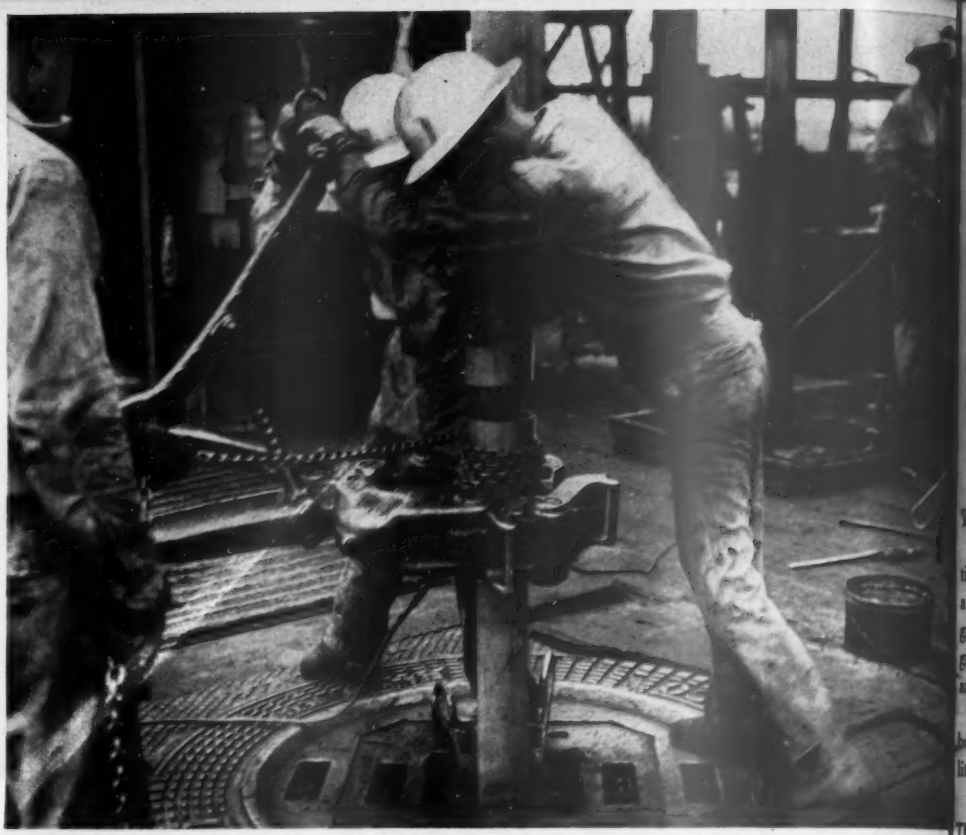
CONTINUED ON NEXT PAGE

(Advertisement)

Big Oil Story
CONTINUED



PURE OIL PRODUCTION . . . in 14 states includes Texas, Oklahoma, Illinois, Louisiana, Wyoming, Michigan, West Virginia, Mississippi, Ohio, New Mexico, Colorado, Kansas, Indiana, Kentucky. Today The Pure Oil Company has 3 million acres under lease, 250,000 acres in production, more than 5,000 producing oil wells and 268 producing gas wells.



"MAKING HOLE" . . . The engine stops, the "Kelly" swings another 30-foot joint of drill pipe into position, skilled drill men center it, screw it on—and away they go, foot by deeper foot, drilling down and down for another potential producer. Pure Oil men are doing this in l states today. Pure Oil's first field at Cabin Creek, We Virginia, discovered December 19, 1914, is still produci its almost unbelievably *golden-colored* Cabin Creek crud

NEEDLING MOTHER EARTH

Great new reserves of vital petroleum—nature's greatest contribution to modern industry—are continually being brought to light. In spite of today's greatly increased consumption of petroleum products, the orderly development of producing fields assures adequate supplies for the future.

Modern methods for the discovery and development of this natural resource are largely responsible. Pure Oil is a leader in this mo conservative, orderly type of oil producti program.

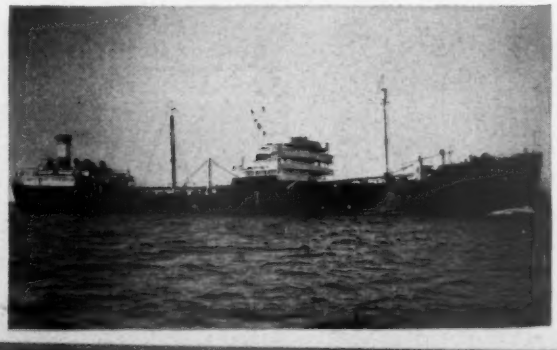
Thorough geological and geophysical surv ing, using the most modern methods and d vices, reduce wasteful "wildcatting." Order organized planning is conserving huge reserv of this great natural resource for generatio to come.

Overland, underground, on high seas, and along 9,000 miles of waterways

10,366 MILES OF PIPELINE—equal to 3½ times across the United States—move crude oil to Pure Oil refineries and finished products to you.



THE "S. S. PURE OIL," flagship of the Pure Oil fleet. Nine of these great deep-water tankers help move petroleum products via the "inland waterways" to petroleum-hungry centers of population along our Eastern seaboard.



PURE OIL TOWBOATS p great river "highways" of mid-Amer shuttling barges day and night—help serve the Middle West and South.



(*Advertisement*)



PURE OIL LUBRICANTS PLANT at the Smiths Bluff refinery in Texas—where the famous "Purelube" line of motor oils and lubricants is processed, blended and packaged by the most modern methods and machinery—assuring exact *uniformity* of high quality in continuous production.

FINISHING SCHOOLS FOR SMART MOLECULES

Modern refineries are turning out more than a thousand different products from petroleum today...

There's no rest for a husky hydrocarbon molecule!

Modern refining processes—a far cry from the simple distillation and "cracking" of earlier days—are an extension of a whole new fascinating field of chemistry. Few realize the great diversity of products made from petroleum today—ingredients for things as different as paint and perfume, fly spray and synthetic rubber!

Today the very "personality" of hydrocarbon molecules can be changed. Little ones are made into big ones, big ones into little ones, and—most important of all—molecules can be rearranged to create fuels more *uniform* in power.

More powerful gasoline from new type "Cat Crackers"

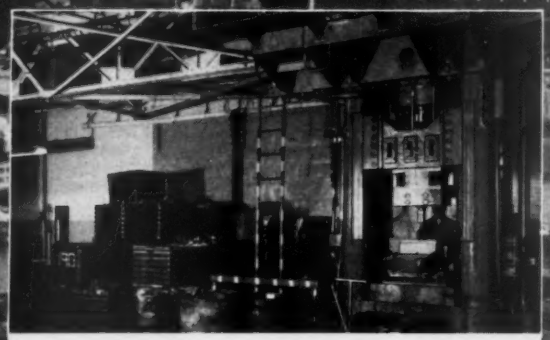
Entirely new methods of "cracking" larger molecules into gasoline molecules have resulted not only in greatly increased supplies but in far more *naturally powerful* motor fuel.

New Catalytic Cracking plants—some the first of their kind to go "on stream" anywhere in the world—are busy at Pure Oil refineries today, turning out great quantities of better high-octane gasoline.

THIS ONE GREAT NEW ORTHOFLOW FLUID CATALYTIC CRACKING UNIT at Pure Oil's Smiths Bluff Refinery, Nederland, Texas, turns out enough high-octane gasoline in one day to drive your car around the world nearly 300 times!



CONTINUED ON NEXT PAGE



POCO HT GREASE B protects the precious motor bearings of this stamping press. Poco Purelube EE is used in the reduction gear unit and miscellaneous oil applications. Tough, adhesive Poco Compound 100 protects the open gears.



HERE AGAIN Poco HT Grease B proves its multipurpose qualities for general grease application—and Puron for general oil applications—while the "specialized" lubrication for the spindle bearings of this spinning frame is Purospin Spindle Oil.

ON THIS STAMPING MACHINE and the one below, Poco HT Grease B (for motor bearings and miscellaneous grease applications) and Poco Compound 100 (for open gears) once again prove their multipurpose quality—to assist in a simplified lubrication program which results in major savings in man-hours and inventory.



HELPING INDUSTRY SIMPLIFY AND SAVE ON LUBRICATION

For years, oil companies have been perfecting more and more specialized lubricants for the increasingly complex lubrication problems of all industry. Management small and big in many industries often has been faced with obstacles and difficulties which lead to costly "down time" and lost man-hours.

For years Pure Oil has been perfecting a line of high-quality *multipurpose* lubricants, each of which does *many different jobs* equally well.

These multipurpose Pure Oil products are helping management simplify and save on maintenance man-hours, lubricant purchases and inventory control—while they provide *surer protection* for the investment in high-cost machines.

Technical assistance is gladly given on any industrial lubrication problem where Pure Oil products are sold. Simply write *The Industrial Lubrication Department, The Pure Oil Company, 35 E. Wacker Drive, Chicago, Illinois.*

DETECTIVE WORK

scientific used oil analysis helps motor fleets save costly trouble



Oil company scientists are even running a "crime lab" to foil the enemies of valuable engines operating hundreds of miles away!

This is going on at Pure Oil Research and Development Laboratories in Crystal Lake, Illinois—saving costly engine repairs by timely analysis *before* the trouble becomes severe.

This valuable "detective work" is actually done by analyzing one pint of used motor oil, taken from the engine in question (whether it be gas or diesel) and mailed in to Crystal Lake.

The tests performed not only reveal what may go wrong, but what will *cause* it, and how to prevent it *now* to insure satisfactory operation in the future. This valuable money-saving service is performed FREE for users of Pure Oil products.



NEW LIFE FOR THE FAMILY HORSEPOWER

Finer fuels and lubricants...to meet the challenge of this "High-Horsepower Age"

Pure Oil research is continually contributing to the development of new, more powerful gasolines, of finer motor oils and lubricants, to lower mileage costs and to give *new life* to the family car.

Pure Oil's improved PURE *Sensitized* gasolines are famous for their "instant response." Pure Oil's new *High HP* Purelube motor oil saves gas, saves oil, saves horsepower. Together, they form the most powerful gas and oil combination developed for your car—and the closest-to-home reminder that now, more than ever, you can be *sure* with Pure.

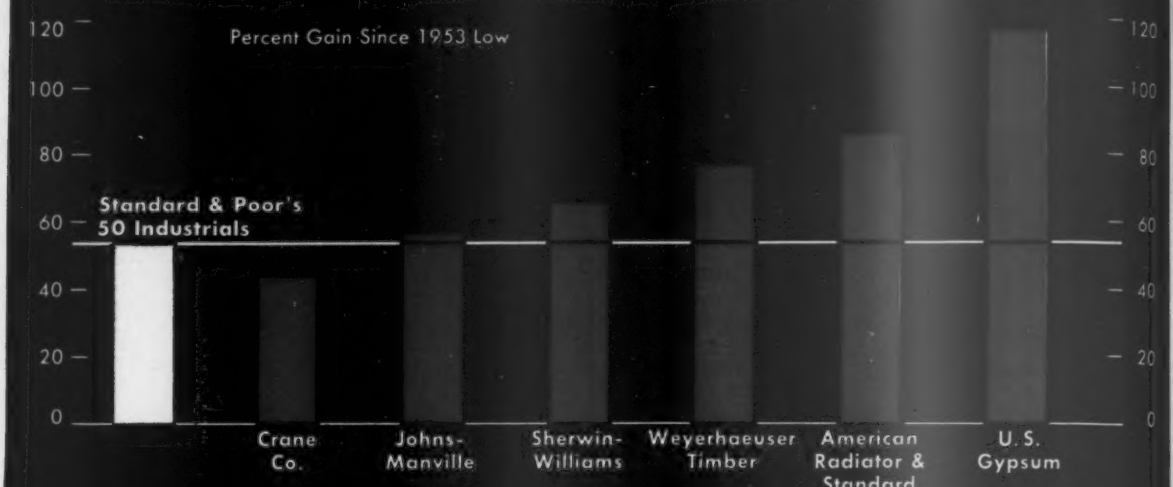
Pure Oil technical service—implemented by a highly complete line of the finest petroleum products—extends into every industrial field today. Farmers, fleet operators, car dealers, too, are turning more and more to Pure Oil for advice and assistance.

Do you have a lubrication problem? Let Pure Oil experts help you solve it. Simply write L. W. Sweet, Vice President for Marketing, *The Pure Oil Company, 35 E. Wacker Drive, Chicago 1, Illinois.*

Be sure with Pure



The Building Boom Reflected on Wall Street



But the Boom Doesn't Show so Strongly in Earnings

	Per Share Earnings		
	1954*	1953	Best Postwar Year
HEATING			
American Radiator	$2.00	$1.83	$2.80
Crane Co.	2.25	3.47	6.64
Holland Furnace	1.25	1.05	4.48
Walworth	.25	.82	1.95
PAINT			
National Lead	$3.10	$2.54	$2.54
Sherwin-Williams	7.50	7.29	7.44
LUMBER			
E. L. Bruce	$2.20	$2.67	$6.79
Weyerhaeuser Timber	6.00	5.92	6.39

	Per Share Earnings		
	1954*	1953	Best Postwar Year
WALLBOARD, ROOFING			
Celotex Corp.	$2.75	$3.15	$7.51
Certain-teed Products	2.50	2.43	4.02
Flintkote	3.50	3.73	6.27
Johns-Manville	5.75	6.20	7.75
Masonite	2.30	2.72	5.86
National Gypsum	4.20	2.71	4.20
U. S. Gypsum	16.80	11.88	16.70
MISCELLANEOUS			
Minneapolis-Honeywell	$5.00	$3.31	$4.78
Pittsburgh Plate Glass	4.00	4.07	4.64

*BUSINESS WEEK Estimate

Investors Count on the Future

Last week, the Commerce Dept. and Labor Dept. made a joint estimate of 1955 construction (page 25). They pegged next year's building at $39.5-billion—some 7% above 1954, itself a record year in dollar volume. Highway construction, public building, and public utility expansion are all expected to hit peak levels next year, and new starts will be only slightly under 1950's peak.

The effect of the report on Wall Street was to power many prominent building supplies shares to highs for the year.

• **Already Hot**—Actually, the forecast for next year just stoked a fire already roaring under building shares. Five of the six building materials stocks shown in the chart above, for example, have had heftier percentage gains since last year's lows than Standard & Poor's daily index of 50 industrial stocks—which is still romping to new historic highs. And this ratio holds pretty true throughout the industry: Of 27 top building suppliers, only five have shown lower gains from the 1953 lows than the 50 industrials.

Probably the biggest gainers as a group are the cement shares. Their industry is enjoying another boom year (BW—Oct.9'54,p68). Close behind cement are roofing and wallboard shares, up 78.9% from last year's low; paint and varnish, up 71.3%; and heating and plumbing, up 64%.

Practically all building is done by relatively small local contractors, who seldom sell shares to the public. Investors anxious to get in on the postwar construction boom have had to go back a step–buy stock not in construction itself, but in the building materials industry. The materials shares thus represent two industries; they have gathered unto themselves all the investment attractions of both.

• **Easing Up**—But, despite the giddy whirl these shares have been getting on the market, many cagey investors—including some large investment trusts—are easing up on their buying of building materials stock.

The reason is indicated in the table under the chart on page 44. Despite booming construction this year, earnings remain off their postwar peaks, with few exceptions. Even Johns-Manville Corp., which has always been regarded as one of the top companies in the industry, won't match 1953's earnings this year. Only a strong second half has kept it from having one of its worst postwar years.

And J-M is no exception to the general pattern, as the table shows. Because of this rather dingy earnings pattern in the midst of peak activity, and because of the consequently dim prospects for increased dividends, many large investors "hesitate to get into building stocks now." They figure that price-earnings ratios are too high; and despite the prospect of even greater activity over the horizon, they're leery of any further buying. On the other hand, few of the pros are selling the building shares they already hold. They are sitting tight, waiting for further price gains.

• **Sales**—Another feature that worries many investors is that, in the face of record activity, even sales in many cases have been off from last year's levels. For the first nine months of the year, paint sales have been running slightly behind last year's. National Lead's nine-month sales are some $23-million below 1953's. Johns-Manville, bedeviled by strikes, shows sales off some $4-million, but expects to match last year's levels with a strong fourth quarter. These figures have caused plenty of puzzlement in Wall Street. Many observers blame the dropoffs on "special situations"—especially for J-M, National Lead Co., and the cement producers, all of which have been hit by strikes this year.

One large investment trust points out that, while the building shares have long been attractive for income, they have never been considered top growth stocks. The industry has always been considered one of feast or famine. It has gone through broad cyclical movements that, though broken up by the postwar expansion, still worry investors who appraise the group. Streeters are haunted by memories of past booms and their subsequent deaths, most of which were quick and painful.

• **Records**—But the prospects for further near-term market appreciation are keeping the building shares popular. Bullish investors believe that future activity—even beyond next year—should establish still more glittering records. Most estimate that by 1960 the first crop of World War II babies will be looking for housing. This, coupled with increasing needs for commercial construction, highways, new airstrips, and the like should start building shares on another price whirl.

However, these same observers aren't sure that future earnings will keep pace with rapidly expanding activity. They point to the factors that have been instrumental in trimming earnings since the postwar peaks: rising labor and raw material costs. It is estimated that these costs are up some 30% since the outbreak of the Korean War, and will rise further as the boom continues. You can see the effect of these costs on profit margins: Of the 17 companies listed on page 44, only two show better margins this year than in their respective peak postwar years. Declines have ranged from 6% to 69%.

Margins are also corroded by heavy amortization charges, which are especially important now when many building materials producers are in the midst of, or are just starting, large-scale expansion programs.

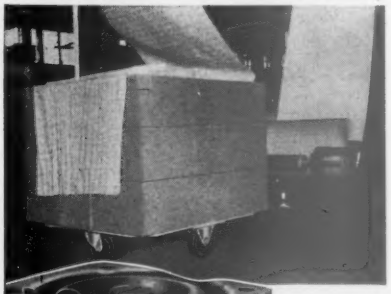
• **Government**—While you can find some disagreement in Wall Street on trends of future earnings among the building materials companies, there is general agreement that the latest government estimates on building are probably pretty accurate. At the beginning of this year, most observers were ready to ring down the curtain on the postwar boom. But new starts have rocketed along at a pace below only 1950's record high (page 162). And the boom has pulled many industries along with it (no single industry is so contingent on so many others as building)—if only in the sense that many companies would have shown even sharper recession losses this year if it had not been for support from the building industry.

There is also a pretty general feeling among Streeters that the government, through its new housing act and its ability to expand or contract public projects, is underwriting the building expansion. The vital nonfarm residen-



Cranston Print Works uses Faultless for More Economical Flow of Print Fabrics

Standardization of materials handling equipment and methods has resulted in the establishment of an economical, simple procedure of product flow in the Cranston Print Works at Webster, Mass.

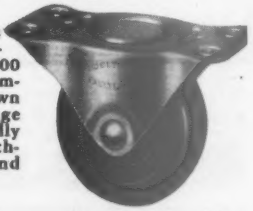




200 Series with roller bearing ruberex wheel

Trucks of one design, a tilt-type box construction, are used by this large company. Cranston engineers selected Faultless 200 and 900 Series Swivel, and 2700 and 9700 Series Rigid casters for all their trucks. Eight inch diameter, Ruberex, cushion-tread wheels were chosen for use on the smooth concrete floors of the Massachusetts plant.

Heavy pressed steel frame and King-pin assembly has made the 200 Series famous for heavy duty work. Large size balls distribute the load around an unusually large raceway. Double raceway of balls in the swivel head and swivel plate assure effortless swiveling. All surfaces are hardened. Faultless 200 Series is designed to withstand more load than can ordinarily be placed on any truck.



The 2700 Series is the Rigid Companion to the 200 Series. Deeply embossed and drawn from heavy gauge steel. It is solidly formed to withstand strain and wear.

This is another unusual material handling achievement for men in industry, made possible by Faultless Casters. Competent engineers, a modern factory, and skilled personnel combine to furnish the dependable casters you need for your individual operation.



To get the complete story on the Cranston Print Works caster application mentioned above, and to receive a free case study each month to help your own operation, write today.

FAULTLESS CASTER CORPORATION EVANSVILLE 7, IND.
Making Casters for more than 64 Years
Offices in Principal Cities • See phone directory

This advertisement is neither an offer to sell nor a solicitation of offers to buy any of these securities. The offering is made only by the Prospectus.

Not a New Issue

November 17, 1954

1,300,000 Shares

Campbell Soup Company

Capital Stock

($1.80 Par Value)

Price $39.25 per Share

Copies of the Prospectus may be obtained from any of the several underwriters, including the undersigned, only in States in which such underwriters are qualified to act as dealers in securities and in which the Prospectus may legally be distributed.

The First Boston Corporation

Blyth & Co., Inc. Goldman, Sachs & Co. Harriman Ripley & Co. Incorporated Kidder, Peabody & Co.

Lehman Brothers Merrill Lynch, Pierce, Fenner & Beane Smith, Barney & Co. White, Weld & Co.

Drexel & Co. Eastman, Dillon & Co. Stone & Webster Securities Corporation Dean Witter & Co.

Clark, Dodge & Co. Dominick & Dominick Hemphill, Noyes & Co.

Hornblower & Weeks Paine, Webber, Jackson & Curtis

PLYMOUTH DODGE Chrysler Corporation DE SOTO CHRYSLER

YOU GET THE GOOD THINGS FIRST FROM CHRYSLER CORPORATION

DIVIDEND ON COMMON STOCK

The Directors of Chrysler Corporation have declared a dividend of seventy-five cents ($.75) per share on the outstanding common stock, payable December 11, 1954 to stockholders of record at the close of business November 16, 1954.

B. E. HUTCHINSON
Chairman, Finance Committee

See Clues on Page 174

want your product manufactured in California?

Improve your Western States market penetration! Let us produce your product in our Los Angeles plant where we have immediately available manufacturing capacity due to recent extensive expansion. Facilities for steel fabrication and industrial equipment assembly in a wide variety—a complete modern plant—an experienced work force. Write in confidence.

WHITING CORPORATION

15661 Lathrop Avenue, Harvey, Illinois

For 70 years manufacturers of materials handling, foundry, transportation and chemical equipment

tial segment of building, which the joint forecast figures will increase next year by 13% over this year, is expected to get a big boost from the new act (BW–Jul.31'54,p32). The move to the suburbs, new family formation, and a yen by apartment dwellers—city and country—for houses of their own, all contribute to the demand for this type of housing.

• **Supply**—There are still those who are wondering if these props for the building program won't backfire. They point out that homebuilding is outstripping new family formation, that the day may not be far off when the supply of homes will exceed the demand.

But in many cases, such as cement, lumber and glass, the suppliers are scrambling to keep up with current demand. Already shortages are showing up in glass and various roofing materials, and the burgeoning replacement market is putting more pressure on thin supplies.

Plenty of Money...

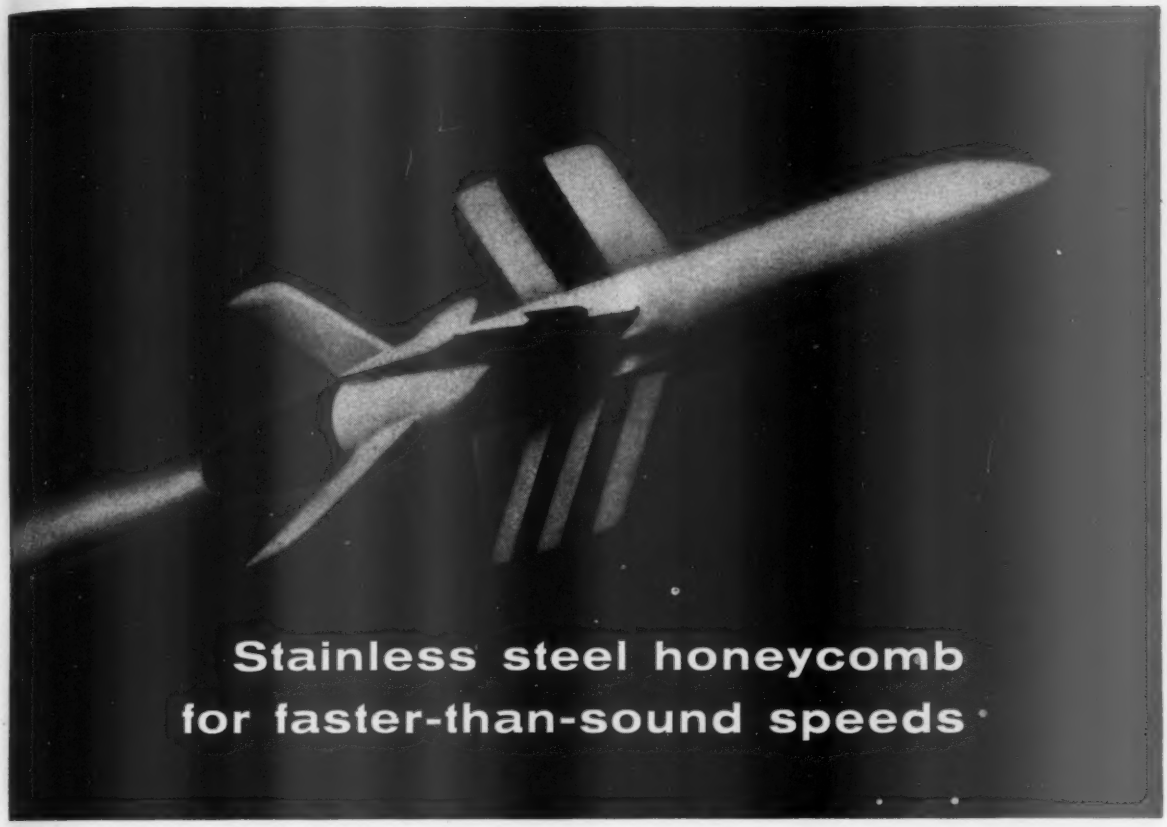
. . . is available for industrial mortgages. And the supply is increasing, survey for the trade reports.

There's plenty of money still available for investment industrial mortgages, despite the heavy postwar drain on the supply. What's more, the available funds are constantly increasing.

That's the main find of the latest survey made for the Society of Industrial Realtors by its industrial mortgage and finance committee. The study covered the principal lending institutions of the U.S. and Canada, according to E. M. Boerke, chairman of the committee.

The survey notes that interest rates on industrial mortgages range from 5½% to 6% in Canada, considerably above the 4½% to 5% prevailing in the U.S. This differential in favor of U.S. borrowers has been widening; only a year ago the ceiling on rates for them was 5½%. And there are some signs that the U.S. rates may drop still further. The survey reported that one large insurance company has indicated a willingness to take on prime industrial mortgages with rates as low as 4¼%.

• **Appraised Value**—The SIR survey also finds that potential lenders are not placing as much emphasis as might be expected on the appraised value of the property. Much greater stress is being put on the borrowing company's past and present fiscal rating, along with its apparent prospects. Other non-property factors in the scales are the borrow-

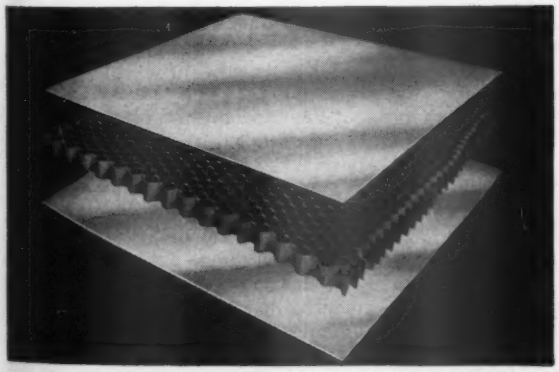


Stainless steel honeycomb for faster-than-sound speeds

Body and wing sections of missiles, rockets and jets present a challenge to engineers. They must be light — yet strong enough to withstand the heat and pressures generated at great speeds.

This Armco Stainless "honeycomb" provides an answer. A honeycomb with walls only two-thousandths of an inch thick is bonded between stainless skins. When this very light section is made from high-strength stainless, more stable structures are attained than by conventional design. In addition, a high percentage of this strength is retained in flight where skin temperatures may reach 900 F.

This dramatic use of a new Armco Stainless (17-7 PH) is one example of the way a special steel in special service can improve product design and performance. Chances are that one of Armco's many grades of stainless steel can do the same for your products.



Exploded drawing of the new stainless steel panel designed for vital parts of jet aircraft and guided missiles that require corrosion resistance, lightness and enduring strength.

ARMCO STEEL CORPORATION
574 Curtis Street, Middletown, Ohio

Send me a catalog on Armco Stainless Steels.

Name _____

Firm _____

Address _____

City _____ *Zone* _____ *State* _____

ARMCO STEEL CORPORATION
MIDDLETOWN, OHIO

ARMCO®

SHEFFIELD STEEL • ARMCO DRAINAGE & METAL PRODUCTS, INC. • THE ARMCO INTERNATIONAL CORPORATION

DOES **LABOR**
LOOM LARGE in YOUR
FUTURE PLANS?

write for this booklet
on TENNESSEE

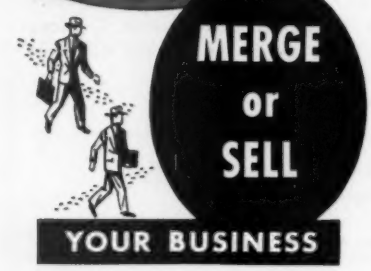
Tennessee workers are noted for their production and the ease with which they adapt themselves to precision work. 99.5% native-born, they are turning out enviable records for manufacturers who have opened branch plants in Tennessee. For full information about Tennessee's labor supply and specific data on raw materials, transportation, markets, plant sites, and other advantages, write for this booklet. 28 pages. No cost or obligation.



Just clip this coupon to your letterhead, sign your name, and mail to
George I. Whitlatch
Executive Director

TENNESSEE INDUSTRIAL & AGRICULTURAL DEVELOPMENT COMMISSION
Room 234 – 517 Commerce Street
Nashville, Tennessee

We Can Help You



If you are considering the sale or merger of your business, and have a net worth in excess of $250,000, contact us. We also aid corporations in acquiring other companies and assist in the financing through private placement loans. We may have available a purchaser or an ideal merger opportunity waiting for you.

W. T. GRIMM & Co.
SPECIALISTS IN THE NEGOTIATION OF DIRECT PLACEMENT LOANS • MERGERS SALE OF COMPANIES

231 S. LaSALLE St. CHICAGO 4, ILLINOIS — FINANCIAL 6-5265
714 W. OLYMPIC BLVD. LOS ANGELES 15, CALIFORNIA — PROSPECT 3809

er's credit rating, the efficiency and continuity of its management, and the basic stability of the industry in which the would-be borrower operates.

Behind this sort of thinking lies the desire not to foreclose on even the most valuable of properties. Most manufacturing plants today are pretty much special-purpose properties. Normally, it's hard to find new tenants for them overnight. Extensive and expensive remodeling might be needed to attract a new tenant or owner.

• **Size**—Few lenders are interested in industrial mortgages of less than $50,000, according to the SIR survey. The top size limit is in the $5-million to $6-million range. But there are a few big lenders who set no ceiling, provided that the amortization arrangements call for full payout in 20 years, or better still in 15 years, and that the borrower has proved its earning power.

The survey found a feeling among lenders generally that purchase-lease back deals are not a truly satisfactory method of financing. Just the same, the number of such deals is increasing, and SIR found many lenders actively soliciting them.

End of a Border Stock Patrol

Ontario, in angry mood over blanket U.S. criticisms, quits joint effort with SEC to curb dubious across-the-line promotions, but holds to its own stiff rules.

"A dismal failure."

That's the verdict of Chmn. O. E. Lennox of the Ontario Securities Commission on a 21-months effort to cooperate with the U.S. in curbing high-pressure promotion and sale of dubious penny mining stocks on both sides of the border.

Last week Lennox pronounced a death sentence for the joint effort, as far as Ontario is concerned. He told Ontario broker-dealers selling in the U.S. that they no longer would be required to register their issues with the Securities & Exchange Commission in Washington (BW—Nov.20'54,p34).

The Ontario commission has required such registration since March, 1953, as its part of a cooperative effort to tighten up regulations on promotion and sale of fly-by-night uranium, gold mining, and oil shares (BW—Oct.9'54, p74). In quitting the joint policing system, however, Ontario is not letting down its own bars—it retains its own stiff regulations.

• **Causes**—There were several reasons, both official and unofficial, for the Ontario move:

• During the 21-month period, nomadic stock promotion mills have moved from Toronto to Montreal—in Quebec province, outside the jurisdiction of the Ontario commission.

• Canadian investors are being fleeced, Toronto brokers say, by sale of highly speculative U.S.-domiciled uranium and gold mining penny stocks that are being peddled by handbills mailed all over Canada. The Canadian brokers say the SEC claims it can do nothing because promoters make sure that these penny stock issues do not exceed $300,000. U.S. issues of $300,000 or less are exempted from full registration. The commission says, however, that it does have the power to revoke the exemption from full registration if in connection with the issue or sale there is evidence of fraud.

Lennox, a forthright administrator, decided it was useless for Ontario to impose SEC rules on its brokers while these big holes elsewhere in the dam stayed wide open.

• **Fuse**—What touched off the Lennox action, was a blast early this month by Keither Funston, president of the New York Stock Exchange, against what he called "rat-hole salesmen" peddling "moose pasture" stocks out of Montreal.

Funston's speech set off a volley of critical editorials in Ontario newspapers. The complaint was that every attack on Montreal mining stock mills is interpreted in the U.S. as a blast against Canadian securities men generally.

• **Counterattack**—Lennox came back at Funston's reference to "shoddy shysters" from Quebec with a public statement calling his attention to penny mining stock mills in the U.S. Addressing his remarks to Funston, Lennox said:

"The residents of your country are being swindled at home without any outside assistance."

Later, in freeing Ontario brokers from SEC rules, Lennox fired some shots at the SEC and its operations.

For one thing, he said, the Washington commission took up to two months to process applications from Ontario brokers for permission to offer securities for sale here.

• **Loophole**—Lennox also charged that a loophole was put into the March, 1953, agreement between the SEC and the Ontario commission, without consulting Ontario.

The original draft of the agreement provided a simple SEC registration form to be used by Canadian (Ontario) brokers when they offered for sale in



"I know that's what he said —I've got it right here in a telegram"

WHEN you want to avoid misunderstanding, say it in a telegram.

People can *see* what you mean when you wire. Your message carries both the impact of speed and the permanence of the written word. That's why active executives on top of the business world rely on Western Union. They know they'll get better results *faster* when they wire. The same built-in advantages of every telegram are *yours* to use—any time, for any purpose.

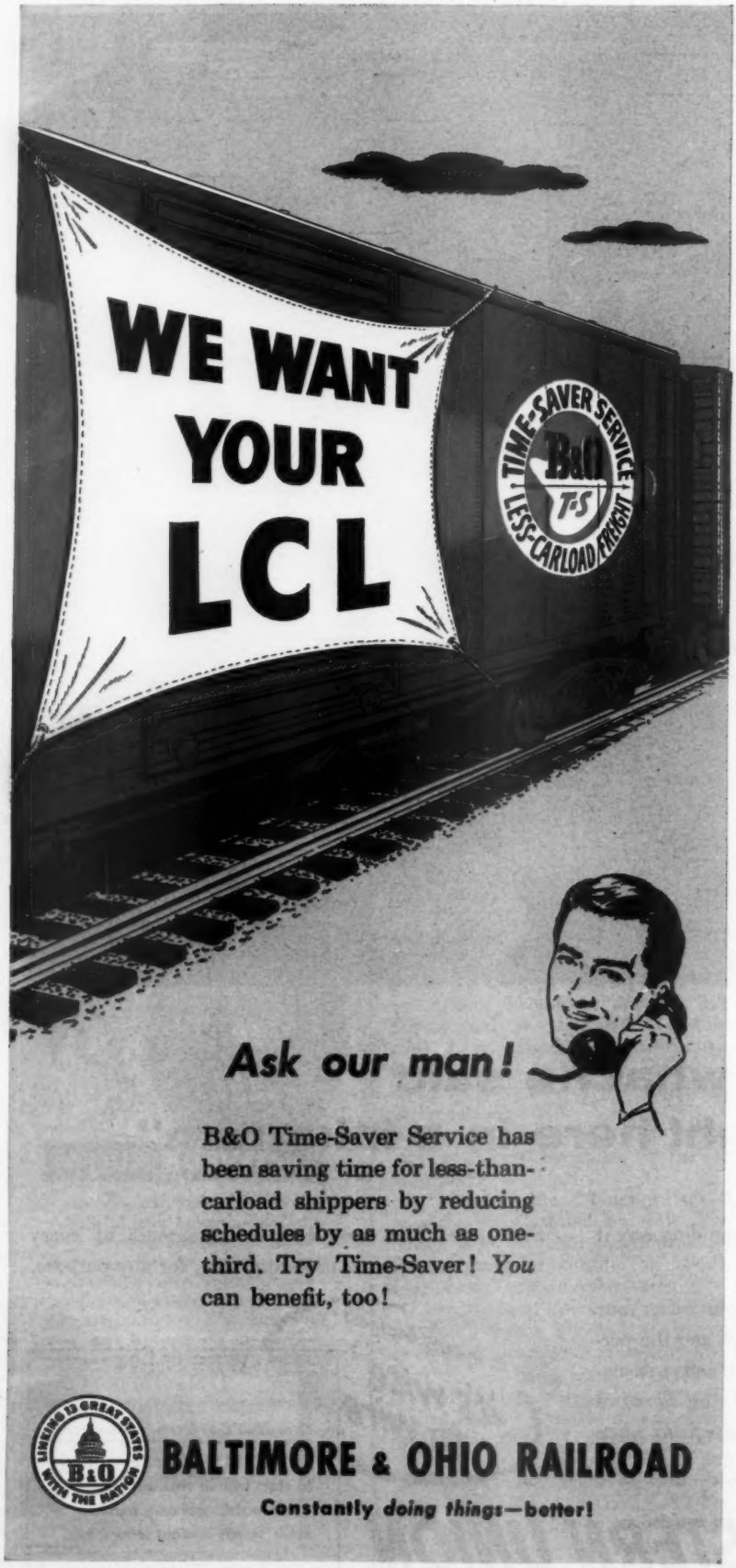
when it means business **it's wise to wire**

WESTERN UNION

Now, You Get More in Telegrams

You get 15 words instead of 10 to start with in fast wires... extra words cost only pennies. More words in night letters, too.

WESTERN UNION



the U.S. issues of less than $300,000 in size; also, this simplified form could be used in the sale in the U.S. of domestic U.S. issues of companies "having their principal place of business in Canada."

Without consulting Ontario, Lennox said, the wording was changed to "domestic (U.S.) issues having their principal business operations in Canada."

The switch, according to Lennox, offered a loophole for U.S. promoters to form companies to acquire mining rights in Canada when their sole operations might "consist of mining claims in Canada devoid of any favorable history, plus a Geiger counter and its operator." These concerns, he added, could sell shares in the U.S. without having to register in Ontario.

"We are concerned with the fact that in the minds of the public these are identified as Canadian ventures," Lennox said.

• **Answer**—SEC had no comment on Lennox's statement, nor on his action.

SEC defenders in Washington, however, said that the delay in getting applications approved was due in many cases not to the SEC but to the fact that the applications contain inadequate information. It's the slowness—or reluctance—of attorneys to amend the original applications, these defenders said, that delays the approval of the applications.

FINANCE BRIEFS

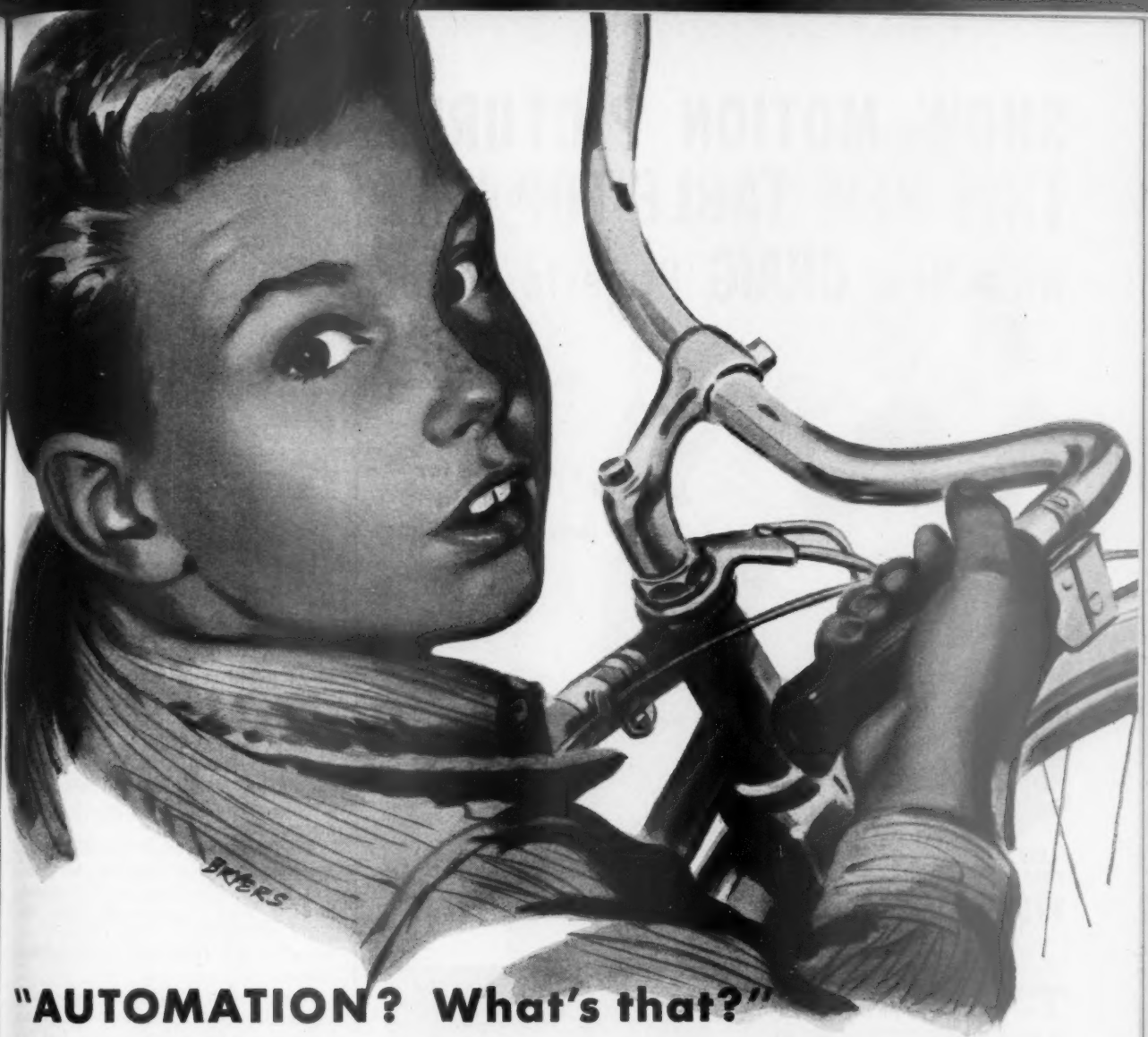
Bull markets mean profit for others besides stock traders. A New York Stock Exchange seat sold last week for $87,000, highest price recorded since the $88,000 of May, 1946. A membership on the American Stock Exchange netted $16,000, highest price since May, 1948. Meanwhile, Moody's Investment Service earned $242,000 in the fiscal year ending Sept. 30—17% above 1953.

•

Olin Mathieson Chemical Corp. has sold $126-million of notes direct to Prudential Insurance Co. Technically, they're 100-year notes, but the agreement says they can be converted later to shorter-term paper. Olin will use the funds to retire a like amount of 20- and 25-year obligations now held by three other insurance companies. The new financing doesn't affect Pru's earlier agreement to buy an additional $42-million of Olin's long-term notes.

•

Campbell Soup Co. stock offering last week proved as big a success as expected (BW—Nov.13'54,p43). The stock was in such great demand that, soon after its offering at $39.25 a share, it was selling in the free market at prices as high as $42.25.

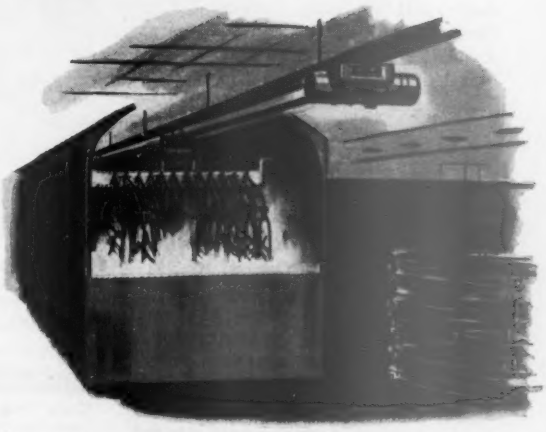


"AUTOMATION? What's that?"

Don't let it throw you, son. Webster doesn't know either. What it is, really, is a fancy name for handling: using machines more and hands less in moving things from one operation to another.

Take that new bike of yours. When it was just a frame, it traveled with a lot of others on a special rack, moved by an electric hoist. Through five separate operations — wash, rinse, pickling, re-rinse, and rust proofing — it moved without a hand touching it. Contact switches and timers controlled the moves, the hoist did all the work . . . *automation!*

Automation saved you some money on the bike you bought — and it's saving right along for the man that makes 'em.



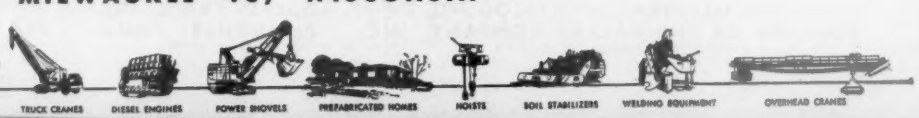
HAVE YOU THOUGHT ABOUT AUTOMATION, and how P&H Electric Hoists can help you make it work? The possibilities are almost endless: with trip levers and timers . . . special rigs and slings . . . hook, jib, or trolley mountings . . . capacities up to 15 tons. If you are thinking about automation, by all means . . .

Let P&H *give you a hand*

HARNISCHFEGER CORPORATION

MILWAUKEE 46, WISCONSIN

the P&H *Line*



SHOW MOTION PICTURES THIS NEW TABLE-TOP WAY with New CRAIG Projecto-Editor



Ideal for showing sales films in prospect's offices — for studying engineering films



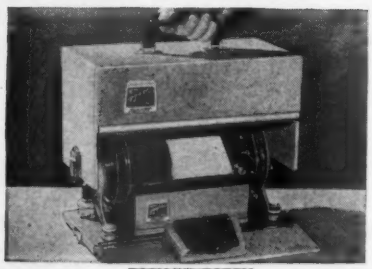
LIST PRICE $79.50

THE best way to present a technical or sales story to a key prospect is to show motion pictures *right on his desk*—with a Craig Projecto-Editor. Compact and lightweight, your salesmen can set it up and be in business in less than 60 seconds.

No need to make complicated arrangements. With a Craig Projecto-Editor you present your story to the right person *when it is convenient for him.* And you get all his attention.

You don't even have to darken his office. The Craig Projecto-Editor shows movies in brilliant action on its 3¼" x 4¼" ground glass screen—large enough and bright enough for small groups. You can stop the film to examine certain scenes frame by frame without harm to film. You can re-run scenes repeatedly to emphasize a strong selling point, without waiting until you get to the end of the reel.

A Craig Projecto-Editor is ideal for analyzing time and motion study, job training and other films in your own plant.



EASY TO CARRY

Complete unit folds into Carrying Case no larger than table model radio. Weighs only 10½ pounds. UL approved. Models for 8mm or 16mm (400' reel capacity) complete with Carrying Case—$79.50.



Craig Professional Unit for reels to 2000' capacity. Price complete, as shown, $79.50. Viewer only, $49.50 © 1954, The Kalart Co.

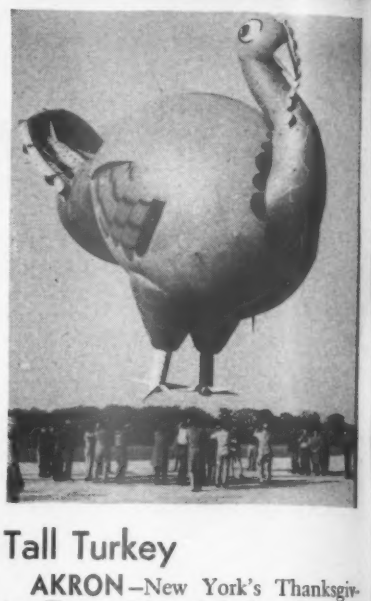
PROJECTO-EDITOR CRAIG KALART

KALART

PLAINVILLE, CONNECTICUT

WRITE FOR ILLUSTRATED CATALOG NO. BW-11. ADDRESS CRAIG, INC. DIVISION OF THE KALART COMPANY, INC. • PLAINVILLE, CONN.

LOCAL BUSINESS



Tall Turkey

AKRON—New York's Thanksgiving Turkey (picture) had a thorough pre-holiday test on the proving grounds at the Goodyear Tire & Rubber Co. last week. The trial run caused quite a stir among school children, and an occasional slamming of brakes by startled drivers.

The airborne turkey was researched, developed, and put together by Goodyear for the Thanksgiving Day parade in New York. Experts previewed the bird's actions here before releasing the thing for top billing in the Broadway affair.

Most farmers might not agree with the helium diet prescribed by Akron balloon men for turkey feeding, but this 50-ft. fowl is tops in his class.

Bell Ringers

LAUREL, IND.—This rural seat of 800 persons (halfway between Cincinnati and Indianapolis) has been cut off from the outside world for more than 14 months. The Hall-Laurel Telephone Co. bogged down one day in September, 1953, and local citizens haven't heard a phone ring since.

Last week, a couple of enterprising young telephone construction men from a neighboring town decided they would try to break the ominous silence. The men, Paul L. Turner and Lilburn A. Park, took on the task of installing an entirely new phone system. Mrs. Edwin Chance—whose daughter nearly died one night because no one could phone a doctor—was the first subscriber.

The "out of order" sign on Laurel's telephones had taken on the proportions of a nightmare. Things like a call to the doctor, fire department, or

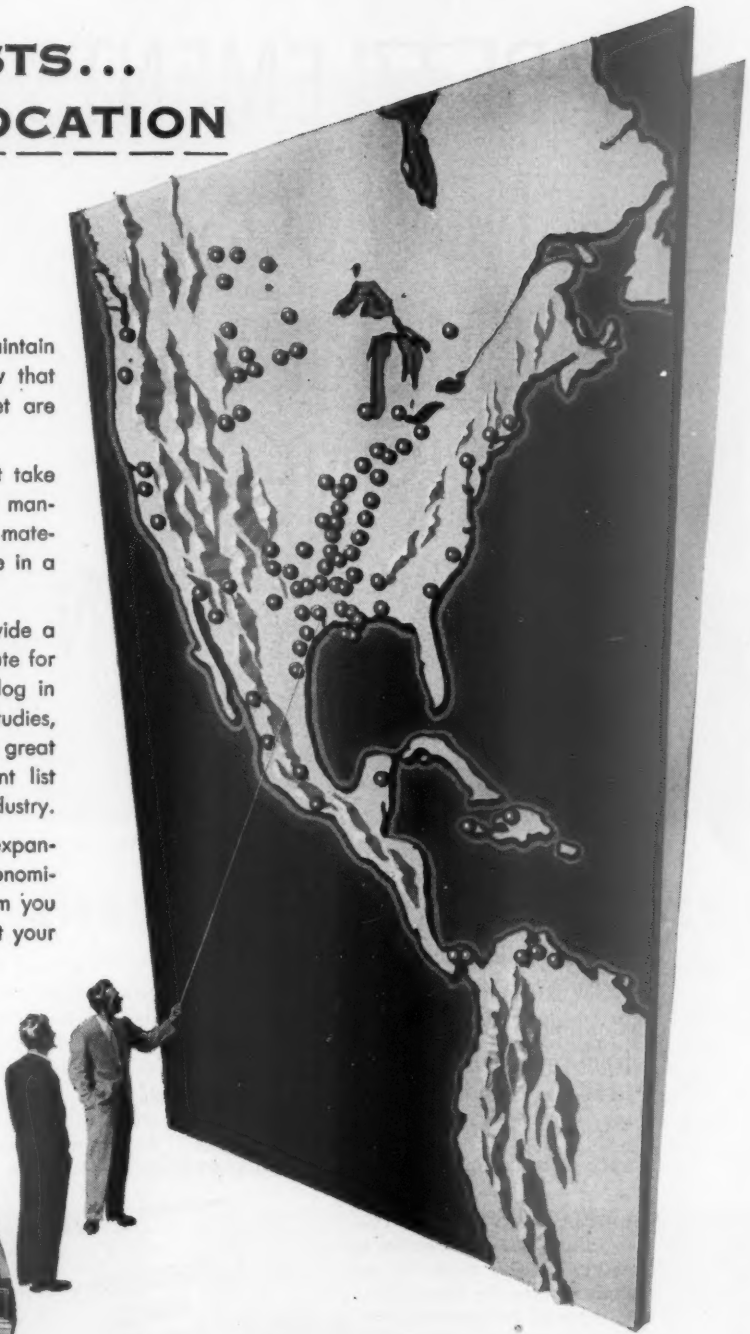
OPERATING COSTS... AND PLANT LOCATION

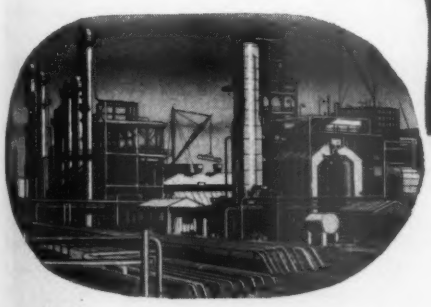
the ability of a company to make and maintain cost reduction is especially significant now that vigorous competition and a buyers' market are back.

Shrewd selections of plant locations that take advantage of new developments, available manpower, transportation, low-cost power and material handling, can well mean the difference in a healthy profit or a ruinous loss.

In locating plants and facilities that provide a low basic operating cost, there is no substitute for experience. Brown & Root's years of backlog in the process industries embraces location studies, engineering, and construction of plants in a great variety of endeavor. Brown & Root's client list takes on the aspects of a "Who's Who" in Industry.

If you are planning new construction or expansion, Brown & Root's experience in fast, economical completion can benefit you. A call from you will put Brown & Root's planning experts at your disposal. No obligation, of course.





A large part of Brown & Root's activity has centered around the process industries in the design and construction of plants for heavy chemical, petroleum, petro-chemical and organic chemical fields.

BROWN-BILT

BROWN & ROOT, INC. *Engineers · Constructors*

—CABLE ADDRESS—BROWNBILT

P. O. BOX 3, HOUSTON 1, TEXAS

Associate Companies:— BROWN ENGINEERING CORP. • BROWN & ROOT MARINE OPERATORS INC.

EMBEZZLEMENTS NOW COST AMERICAN BUSINESS OVER $2 MILLION A DAY!



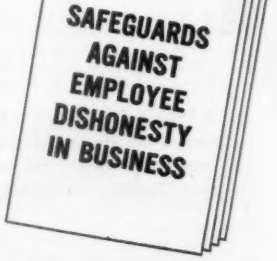
No business, regardless of size, is immune from this danger.

But you can protect your business right *now* with a bond covering *all* employees!

NOW is the best time — while you're planning next year's budget. The cost of a bond is a small item — but it may prove to be the most important one in your budget!

Speak to our agent today. If you're not sure of his name — we'll supply it promptly.

EMPLOYERS ONLY! This important new booklet has been written for your exclusive use. Prepared by the American Institute of Accountants (the Natl. Assoc. of CPAs) and the Surety Association, it gives you practical suggestions to help reduce the opportunities for employee dishonesty. Write on your letterhead for this free booklet. Address Department A.



AMERICAN SURETY COMPANY 100 Broadway • New York 5, N. Y.

FIDELITY • SURETY • CASUALTY • INLAND MARINE
HOMEOWNERS • ACCOUNTANTS LIABILITY • AVIATION

sheriff were out. A private line in the New York Central RR freight office was donated to the village for out-of-town emergency connections.

No one is quite sure just how things got this way. Some say the old phone company (founded in 1903) was in bad shape financially. At any rate, when something went wrong with the batteries behind the switchboard, the plugs were pulled and never put back.

Big phone companies in the state wanted no part of Laurel because it was miles from nowhere—a lineman's headache. But linemen Turner and Park think they can put Laurel back in business "with everyone's help." So far, the new system is the talk of the town (over backyard fences—not telephones).

Dream Road

CHARLESTON, W. VA.—Last week, West Virginia's "dream highway" (the turnpike from here to Princeton, W. Va.) turned into a traffic cop's nightmare.

So many motorists crammed on to have a look at the new road when it opened that autos were bumper to bumper for the entire 88-mi. two-lane run. Police said that no special provisions had been made at the interchanges (only one toll-taker at many spots).

No one could give an accurate estimate as to just how many sightseers were on the road, but one interchange reported "at least 10,000 cars passed through here."

Local businessmen called the mess a moral victory for editor Frank Knight of the Charleston Gazette, who pushed for the turnpike. The state crossed him up and built a two-lane road instead of the originally specified four-laner. Courts upheld the state's plan, saying the other two lanes would come when traffic warranted it. Knight contended that taking money for the privilege of driving on a two-lane highway was illegal.

About Time

BOSTON—At the end of October, four New England states and several communities in Vermont belatedly returned to standard time. Everyone else in the country on daylight saving had turned back the clock to standard time one month earlier (BW—Oct.2'54,p 142).

The Greater Boston Chamber of Commerce decided to survey 107 firms to see how they liked the experiment of having one extra month of daylight time. Questions went: Did the extension cause inconvenience? Should DST end the last Sunday in September, or be discontinued completely? Should it be extended through October again

FINISHING



DU PONT DULUX® Enamel selected for America's first jet transport

DULUX® finish gives topflight performance

Flashing through the sky on the new Boeing 707 jet Stratoliner . . . racing across the countryside on the record-breaking Talgo streamliner . . . cutting through the Atlantic on the luxury liner S.S. Independence: Du Pont DULUX Enamel is proving day by day that it's a finish that can really take it!

Durable DULUX dries to a smooth, glossy surface that reduces wind drag . . . resists cinders, soot and road blast as well as salty sea air. And it has the strength and flexibility needed to withstand hard knocks without chipping or cracking.

Already more than 12,000 Du Pont finish formulas are serving industry. Perhaps a Du Pont finish can help you improve or develop a product—cut production and maintenance costs. For complete information, contact the Du Pont sales technician in your area, or write E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington, Delaware.



111 M. P. H. TALGO STREAMLINER gleams with Du Pont Smudge-Resistant Aluminum Finish and DULUX Red Enamel. The A. C. F. Industries train uses Du Pont finishes throughout.



AMERICAN EXPORT LINES keeps appearances up . . . costs down with Du Pont DULUX Marine Finishes on interior and exterior of luxury liner S. S. Independence.

Du Pont Industrial Finishes

Chemically engineered to do the job better

DU PONT
REG. U.S. PAT. OFF.

Better Things for Better Living . . . *through Chemistry*



YESTERDAY'S WASTE... TODAY'S WEALTH

Natural gas . . . Nature's miracle fuel. Once burned in the field as an unwanted by-product of oil or left unused underground.

Today, Tennessee Gas turns this great natural resource into wealth. Puts it to work by piping it from the Southwest to the tremendous fuel-hungry markets of the East.

This great pipeline buried below the reach of storms, immune to traffic delays, delivers a billion-and-a-half cubic feet of gas a day. Assures both home and industry a dependable, day-to-day, round-the-clock supply of the world's most efficient fuel.

Better heat, better living for millions!

In ceramics and many other industries requiring precise heat control, the use of dependable, low-cost natural gas is steadily growing.



Clean, convenient, even-burning. Natural gas—ideal for cooking, home heating. Now available to millions who could not be supplied before.

TENNESSEE GAS
TRANSMISSION COMPANY
HOUSTON, TEXAS

AMERICA'S LEADING TRANSPORTER OF NATURAL GAS



next year, or be extended on a year-round basis?

Last week, the answers came pouring in. Business said (by a two to one vote) that it had not been seriously inconvenienced. As for ending DST in September or continuing it through October, the vote split about evenly. Almost everyone was against discontinuing DST entirely—but the vote went two to one against extending it throughout the year.

Most disturbed by the extension were the airlines, bus lines, trucking companies, steamship lines, and railroads—11 out of 15 said they were seriously inconvenienced. Hotels and investment houses also took a dim view of the one-month extension. Those who didn't squawk were the insurance companies, utilities, retailers, manufacturers, and wholesalers.

Most agreed with this line of thinking: Extension of DST was fine—for one month, or all year—so long as states outside New England also joined in.

Bus Clubs

CINCINNATI—Officials of the Cincinnati Transit Co. put forth a plan to members of the suburban Mt. Lookout Civic Assn. last week that might be a step toward solution of the city's commuter problem.

The plan calls for a system of bus clubs. Members of these clubs would come from the various residential communities around the Cincinnati area. Bus officials believe that businessmen riders would pay for a guaranteed seat downtown in the morning and one back home after the offices close.

The system would run on a charter bus arrangement, with a membership fee and an additional 10¢ per ride for each member. The amount of the fee was not divulged. Buses would pick up riders in specially designated spots around the suburbs, and take them to a central point downtown, company officials said.

"No pushing, shoving, or standing up," was the sales pitch. The idea seems to have the backing of several civic groups, but so far is still in the planning stage.

Face-Lifting Aid

EAST CHICAGO, IND.—Purdue University, a group of industrial corporations, and city officials joined last week to incorporate a million-dollar redevelopment foundation. The organization (Purdue-Calumet Development Foundation) will be empowered to help in slum clearance and neighborhood rehabilitation. Money will be raised from businesses in the area. Sponsors estimate that the first $1-million will provide for a 3-yr. program.



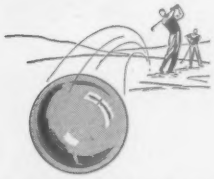
STOP CORROSION
from destroying your plant!

TRUSCON "Speed Rex" Protects Metal, Concrete and Wood Against The Ravages of Acids, Alkali, Moisture!

Truscon's business is helping your Maintenance Department cut costs, prevent expensive damage to your plant and equipment.

One of Truscon's products that can be tremendously helpful to your Maintenance Chief is "Speed Rex" . . . an all-purpose coating that owes its outstanding characteristics to DEVRAN, an Epoxy Resin that imparts to paint greater resistance to corrosive chemicals.

Maintenance Problem? TELL IT TO TRUSCON!



IT'S ALIVE! IT'S DEVRAN!
Devran (Epoxy Resin) enables "Speed Rex" to bounce back from *hard knocks* as well as from chemicals. Actually, a ball of solid Devran has more bounce than a golf ball!



TRUSCON Laboratories
Division of Devoe & Raynolds Co., Inc., Detroit 11, Michigan



AMERICAN MOTORS CORP. gets first organization chart. George Romney (center), new chairman and president, checks it with vice-presidents H. G. Perkins (left) and J. L. Brown, Jr. In the setup, a batch of younger men are finding new niches, many of them in key spots.

AMC: N

American Motors Corp. has tackled what is probably the toughest job in the automotive industry. Like other manufacturers it is introducing new models in its many product lines; unlike other manufacturers it is simultaneously introducing a new model in its management organization. In each case the changes are deep and sweeping. But there the similarity ends.

Product changes, such as the Kelvinator electric ranges shown a month ago and the Nash and Hudson Ramblers put on sale this week, were begun many months ago. Management changes—a complete reorganization—were begun on the weekend of Oct. 9. The product changes were predictable and planned, as dictated by custom and competition. The management changes were as unpredictable and sudden as the death that caused them.

• **Rumors**—Early in October many auto industry observers believed that American Motors—formed last spring by combining Hudson Motor Car Co. and Nash-Kelvinator Corp.—some day would be merged with Studebaker-Packard Corp. Those same observers were convinced the death on Oct. 8 of George W. Mason, chairman and president of AMC, made the merger imminent (BW—Oct.16'54,p27).

By this week the merger rumors were about dead, slain by the rapidity of AMC's management reorganization—plus the drive of the man behind it, George Romney, new chairman and president.

Management reorganizations, especially after mergers such as created American Motors, are routine. But there was no reorganization after the Hudson-Nash deal, and the drastic shuffle within AMC now is a special case. It is special and astonishing because of the company's size and its past pattern.

• **Other Aspects**—American Motors attracts attention in automotive circles because it is definitely a "have not" company—with less than 3% of the auto market so far this year—and is striving to get back in the running. But autos are only part of American Motors. In its other fields, it is among the giants:

Kelvinator Div. is fourth in major appliance sales; first in sales of commercial ice cream cabinets; second in export sales. It produced 638,000 units in the 1953 fiscal year (ending Sept. 30), and never had an unprofitable year since 1928 until last year. Its

One-Man Show Now

subsidiary, Altorfer Bros. Co., was first with the powered washing machine.

Kelvinator of Canada has 15% of the appliance industry in Canada and through a recent tie-up with Sears-Simpson of Canada probably will become the largest appliance manufacturer in that country; for fiscal 1953 it had sales of $17.4-million.

Nash-Kelvinator Ltd. of England is the No. 3 producer in that market, second in export, and manufactured 60,000 refrigeration items in fiscal 1953.

Ranco, Inc., (69% owned by AMC) is the world's largest manufacturer of temperature controls for refrigeration and motor vehicles, with between 60% and 70% of the market in its field; in fiscal 1953 it produced 9.5-million units and supplies all auto manufacturers except Chevrolet and Willys; in fiscal 1953 sales were $19.9-million, with only about 12% of its sales to the parent corporation.

Refrigeration Discount Corp., founded in 1926, was a pioneer in dealer and retail financing of appliance purchases. Now it has out more than $70-million in loans, with more than half of its paper on non-Kelvinator products.

Evart Products Co., the plastics division, is one of the country's largest users of plastics. It is the developer of a principal process for accurate measurement of material going into a die; and a supplier to companies other than AMC.

In short, Nash-Kelvinator Corp. at the end of its 1953 fiscal year was a company with 16 plants, employing 25,000, with sales of $478,697,891, and profit of $14,123,026. Its unconsolidated subsidiaries (Canada, England, Ranco and DeDisCo) earned $4.5-million and paid the parent $2.3-million in dividends. Kelvinator accounted for 22% of sales.

American Motors, on April 30, 1954, had working capital of $118-million, and total assets of $416.8-million. For the six months ending June 30, sales were estimated at $258-million. So for the calendar year 1954, AMC could still wind up with sales of about half a billion dollars.

• **One Man Show**—Until George Mason died last month all this was a one-man company.

American Motors had no organization chart. It had no policy committee or other instrumentality for pooling the executives' brains and experience. George Mason had built Kelvinator; after it merged with Nash in 1937 he had built the combined company. In some respects a genius, he knew more than any one of his managers—as far as his company's interests were concerned—about engineering, finance, production, and sales (in addition to having time to become one of the world's most avid and expert fly fishermen.)

George Romney was executive vice-president and within the company a strong figure. To outsiders, though, Mason alone was American Motors.

"You can have only one front man, one spokesman, you know," Romney comments now.

It also seemed that AMC had no important executives except Mason, Romney (who was well-known in the auto industry before he went to Nash), and Clay Doss, head of sales. This appearance of lack of management strengthened the rumors about an impending merger with Studebaker-Packard (BW—Oct.23'54,p32).

• **Policy Committee**—How deceptive that appearance was became evident less than a week following Mason's death. Romney was elected president, chairman of the board, and general manager. The board of directors actually had little choice—no one knew as much about the company as Romney—although one auto man, no admirer of Romney, says disparagingly, "He was just the guy who carried Mason's brief case."

The day after his election Romney held a press conference and announced formation of a policy committee and named seven members of it. The average age of the committee was 47—which happens also to be Romney's age.

That's when the industry realized that Mason, assisted by Romney, had assembled a younger group of management men.

While the younger men already were in the corporation they were not all in key spots, nor in the proper spots. But Romney knew who they were and what their capabilities were—for one simple reason.

He confesses now that while he did not expect Mason's death he had many times privately drawn organization charts, then stuffed them away in his desk for possible future reference. When the time came to bring out the charts, Romney had two valuable allies: William H. McGaughey who at Romney's direction had been studying

Today's BIG appetite for goods and services is in INDUSTRIAL GEORGIA



...where ever-expanding home markets are an important source of new business. This increased buying-producing power has attracted over 7,100 new firms—including some of America's biggest names.

Industrial Memo: to all expansion-minded executives



▶ **Labor**
Higher living standards boost the Georgia worker to high efficiency.

▶ **Climate**
Mild, year 'round weather permits full production every day.

▶ **Electric Power**
Unlimited—reaches out to every community.

▶ **Transportation**
The vital hub of land, sea and air routes of the entire Southeast.

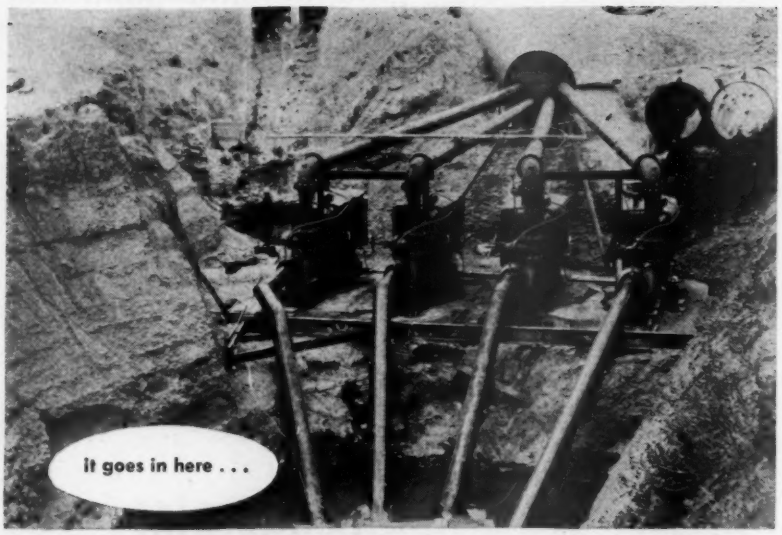
▶ **Sites**
A wide choice to fit every industrial need.



▶ **and More . . .**
Abundant, soft waters—rich, natural resources—plus nearby, ever-growing markets for your products . . .

For complete facts and latest figures, Write to: Dept. 8-W.

Nelson M. Shipp, Sec'y.
Ga. Dept. of Commerce
100 State Capitol
Atlanta, Georgia





thirst-quencher . . . modern style
— another GARDNER-DENVER job

When irrigation farmers want to make steady "rain" for thirsty crops . . . they install Gardner-Denver irrigation pumps like these. Helping increase food production on farms and ranches . . . that's another basic job for Gardner-Denver.

In agriculture, manufacturing, construction, mining, petroleum, transportation . . . in every basic industry . . . Gardner-Denver is the name for quality in pumps, air compressors, rock drills and pneumatic equipment. Gardner-Denver Company, Quincy, Ill.

SINCE 1859

GARDNER-DENVER

THE QUALITY LEADER IN COMPRESSORS, PUMPS AND ROCK DRILLS FOR CONSTRUCTION, MINING, PETROLEUM AND GENERAL INDUSTRY

". . . 'I visited the plants, the dealers, the service places, the offices' . . ."

STORY starts on p. 58

management development for many months; and J. L. Brown, Jr., a graduate of the Harvard Business School and a Nash-Kelvinator official since 1947.

• **Shaking Down**—Last week the new AMC organization seemed to be set for the time being, after being changed almost daily for the past two weeks.

It is a conventional breakdown of the corporation with four divisions: Appliance; Export and Subsidiaries; Automotive; and Special Products. Staff offices include public relations. Romney says one past AMC mistake was not properly telling its story.

• **Youth and Age**—What Romney calls "that happy combination of a strong group of senior executives and a strong group of junior executives" shows up on his policy committee. Members are Romney, 47; Brown, 49; McGaughey, 42, representing communications and public relations as well as management development; Charles T. Lawson, 59, executive vice-president for the Appliance Div.; B. A. Chapman, 45, vice-president and general manager of Kelvinator; Howard A. Lewis, 63, vice-president for the Export and Subsidiaries Div.; Meade F. Moore, 59, vice-president, Automotive Research and Engineering; Stuart Baits, 62, vice-president and general manager, Hudson Special Products Div.; Edward Cushman, 40, vice-president and director of industrial relations; Elmer Bernitt, 44, vice-president, manufacturing, Automotive Div.; and J. J. Timpy, 53, vice-president, finance.

Romney is quick to point out that under each of the older men heading an operating division is at least one man in his 40s—and sometimes two or three. All of these men were in AMC when Romney became president—the only importation since has been Roy Abernethy, vice-president, Nash Sales, whose appointment had been agreed on by Mason before his death.

Romney credits this cadre of young men to Mason, although Romney's friends say much of it was his doing. Mason hired Romney from the Automobile Manufacturers Assn., where he was managing director, in 1948.

"For two years," recalls Romney, "I learned the business. I visited the plants, the dealers, the service places, the offices. That's what Mason wanted me to do."

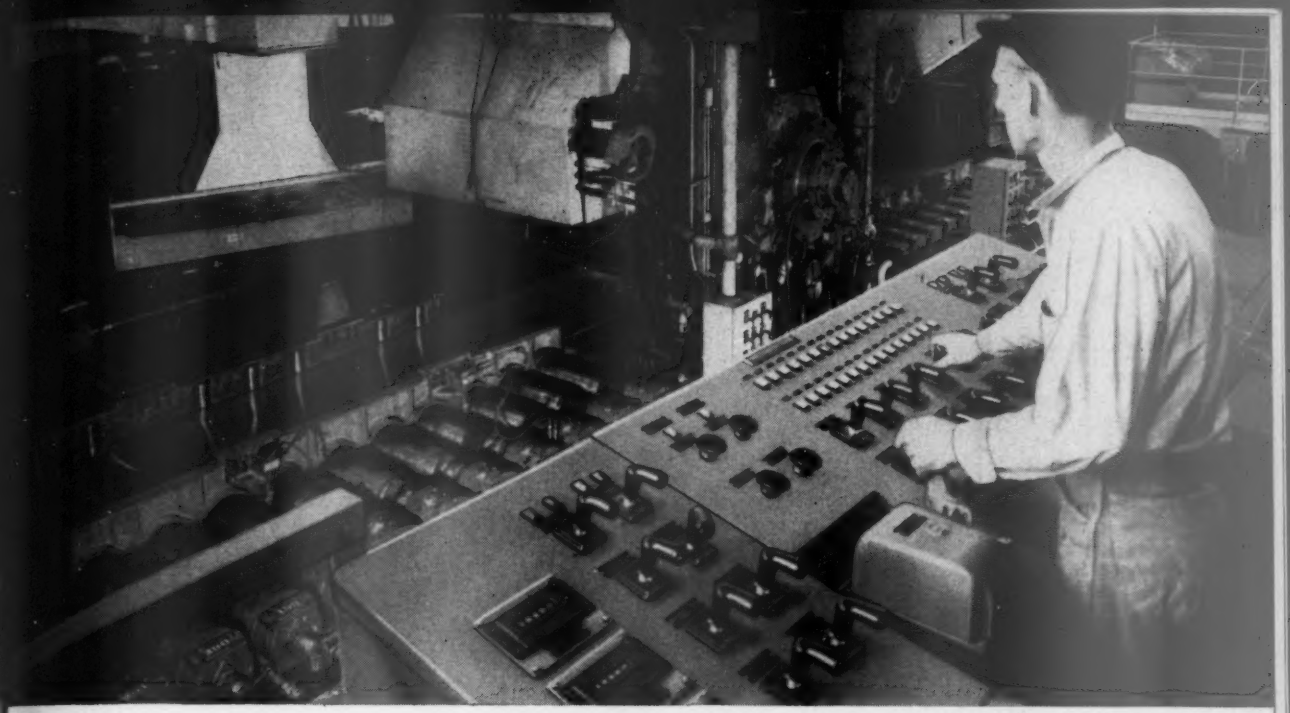
On his policy committee, Romney himself represents the automotive side of American Motors, and also presides



Find out about the production of your • Public Relations • Promotional • Sales Training and • TV Commercial Films using the facilities of Universal City, California, the 400 acre motion picture plant of Universal Pictures, through UNITED WORLD FILMS, INC., a wholly owned subsidiary of Universal Pictures Co., Inc., 1445 Park Avenue, New York 29, New York.



FIVE TONS OF "LIGHT WEIGHT"! Known everywhere as the "world's lightest structural metal," it's something new indeed to see magnesium rolling ingot in five-ton lengths being lowered away to huge saws in rooms beneath the earth—where shorter ingots can be prepared for rolling in Dow's new coil mill.

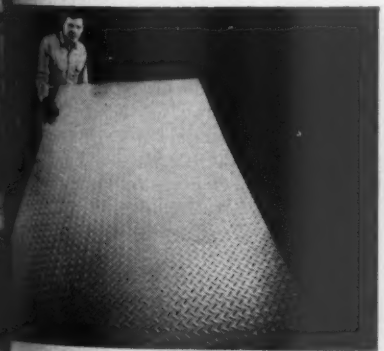


Operator's touch controls slab movement through 84" rolls.

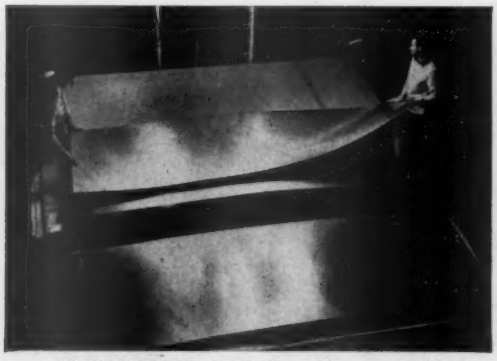
look at Magnesium!

UP TO 25% PRICE REDUCTION ON PLATE & SHEET

Now Available! Tremendous new Dow facilities, now in operation, are geared to supply large quantities of magnesium plate, sheet and extrusions—in many new sizes, shapes and forms. Years of experience with magnesium were combined with newest *volume production techniques* to create the world's first 84-inch coil mill for rolling magnesium. If you are a designer, engineer or manufacturer —anxious to cut costs and improve products—it's time to take a *new look* at strong, lightweight magnesium! Call the nearest Dow office or write today for information—THE DOW CHEMICAL COMPANY, Magnesium Sales Department, Midland, Michigan.



MAGNESIUM PLATE—Light, strong magnesium tread plate—lengths to 16 feet, widths to 6 feet, thickness to 2 inches.



MAGNESIUM SHEET — New production facilities and rigid inspection insure top quality magnesium products.



MAGNESIUM COIL—Note size of coil, illustrates new availability in greater widths and lengths.

you can depend on DOW MAGNESIUM

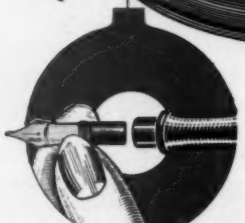
DOW

The pen that fills itself

The perfect gift for the desk writer

Fountain-base automatically fills pen every time pen is returned to socket. Pen writes a full page or more at each filling.





TO SELECT OR REPLACE ... HERE'S ALL YOU DO

CHOOSE the right point for the way you write... by number



Only a few of the most popular point styles shown

Esterbrook®

DESK PEN SETS

MADE IN U.S.A., CANADA AND ENGLAND

THE ESTERBROOK PEN COMPANY, CAMDEN 1, NEW JERSEY
The Esterbrook Pen Company of Canada, Ltd.,
92 Fleet Street, East; Toronto, Ontario

COPYRIGHT 1954, THE ESTERBROOK PEN COMPANY

". . . Romney is convinced there is a market for a small car . . ."

STORY starts on p. 3

over the automotive operating committee—and not just because most of his business experience has been in the auto industry.

"We are a well diversified company—we could go out of the automobile business and still be a big company and a successful company," he says. With Kelvinator's solid position, that obviously is true. But it is just as true that future growth for American Motors depends in a very large measure on the auto end of the business, and thus demands the best thinking of the top man.

• **Small Car Field**—The direction of Romney's thinking was partially revealed this week when the Ramblers were introduced by both Nash and Hudson dealers. They are identical, except for different nameplates—one for Hudson, the other for Nash. This will set them up as separate cars, which will be exploited in future years by making them completely different in appearance although both of them will be based on the same body shell (BW—Nov.6'54,p32).

By increasing his dealer outlets for the Rambler, Romney thinks he will get higher volume, and is figuring his prices accordingly. For 1955 he is sure that the Ramblers, model-for-model, will be cheaper than the comparable products of Chevrolet, Ford and Plymouth. To Romney, that is attainment of one of the goals of the Hudson-Nash merger—greater volume and lower production cost which will permit a lower price.

Another facet of Romney's thinking on the auto market also is typified by the Rambler. This year the Rambler does not follow the Chevrolet-Ford-Plymouth trend toward a bigger car, and it will not in future years. Romney, an apt pupil of Mason, is convinced there is a market for a small car. As his low-price competitors keep moving away from the market he believes the Rambler will increase its share.

In this belief he is running counter to the industry thinking. Other auto men, such as Ed Cole of Chevrolet, say that "every car buyer wants his neighbor to know he's been successful" (BW—Oct.30'54,p44), so he keeps buying a bigger car. Romney has two answers to that: (1) he'll get the group who by circumstances are confined to a smaller, less expensive car; (2) he'll get the second-car buyers. He concedes the market he is talking about is limited—but if he can sell 200,000 Ramblers

what are new plants made of?



Into a new plant go steel and glass and concrete—machines and metals, manpower and money.

More important, however, is the skill, the experience and the resources of the planners and constructors. The engineering and construction firm that stands behind the plans of a new plant may well hold the key to its future success.

Over its half-century of existence Ebasco has engineered and constructed more than two billion dollars of new plants. Ebasco can be brought into action the moment the need for new facilities is recognized—can cover every step from site selection, preliminary planning, engineering, actual construction, right through initial plant operation.

Our services are available, practically and economically, in building both large and small projects. Every new plant handled by Ebasco receives the same quality engineering and construction—the mark of Ebasco projects all over the world.

Our booklet—"The Inside Story of Outside Help"—tells the story of Ebasco and its services. For a copy, without obligation, write Ebasco Services Incorporated, Two Rector Street, New York 6, New York.

ENGINEERS · CONSTRUCTORS
EBASCO
BUSINESS CONSULTANTS

NEW YORK · CHICAGO · DALLAS
PORTLAND, ORE. · WASHINGTON, D. C.

Appraisal • Budget • Business Studies • Consulting Engineering Design & Construction • Financial • Industrial Relations • Inspection & Expediting • Insurance, Pensions & Safety • Purchasing • Rates & Pricing • Research • Sales & Public Relations • Space Planning Systems & Methods • Tax • Traffic • Wasnington Office

Ebasco Teamwork gets things done anywhere in the world

You mean that now our whole family is covered by GROUP INSURANCE?



That's right—we have benefits for dependents in our company's plan with NEW YORK LIFE!

FAMILY ILLNESS or injury can quickly empty an employee's pockets. That's why so many companies are setting up Group Insurance programs through New York Life which cover employees' wives and dependent children as well as the workers themselves.

Health care coverages include hospital, surgical and medical expense insurance. The worker's morale—and his efficiency—are both higher, knowing such protection is at hand. And each time a claim is paid, good will toward his company is created in the employee's home and his community.

To pay the heavy expenses of *unusual or prolonged* illness, Major Medical Expense insurance can also be integrated with the basic plan. Family benefits are included.

For complete information about Group Insurance with family benefits, see your New York Life agent, your broker, or write direct today.

NEW YORK LIFE
INSURANCE COMPANY
51 Madison Avenue, New York 10, N.Y.
(In Canada: 320 Bay Street, Toronto, Ontario)

A MUTUAL COMPANY nylic FOUNDED IN 1845

". . . every night lights burn late on the third (executive) floor . . ."

STORY starts on p. 59

a year it is an economic volume and he can make fine profits.

• **Defense Work**—Romney also believes that American Motors should be a larger factor in defense work—although not to the point where defense work would be a major share of sales. "We want enough of a defense base," Romney says, "so that it is good insurance, and we are doing our share, and if war comes along and production is interrupted we can quickly expand defense work."

That's the purpose of the newly created Hudson Special Products Div., which will attempt to get sufficient work to fill the old Hudson car plant in Detroit now that Hudson auto production has been moved to the Nash factory in Kenosha, Wis.

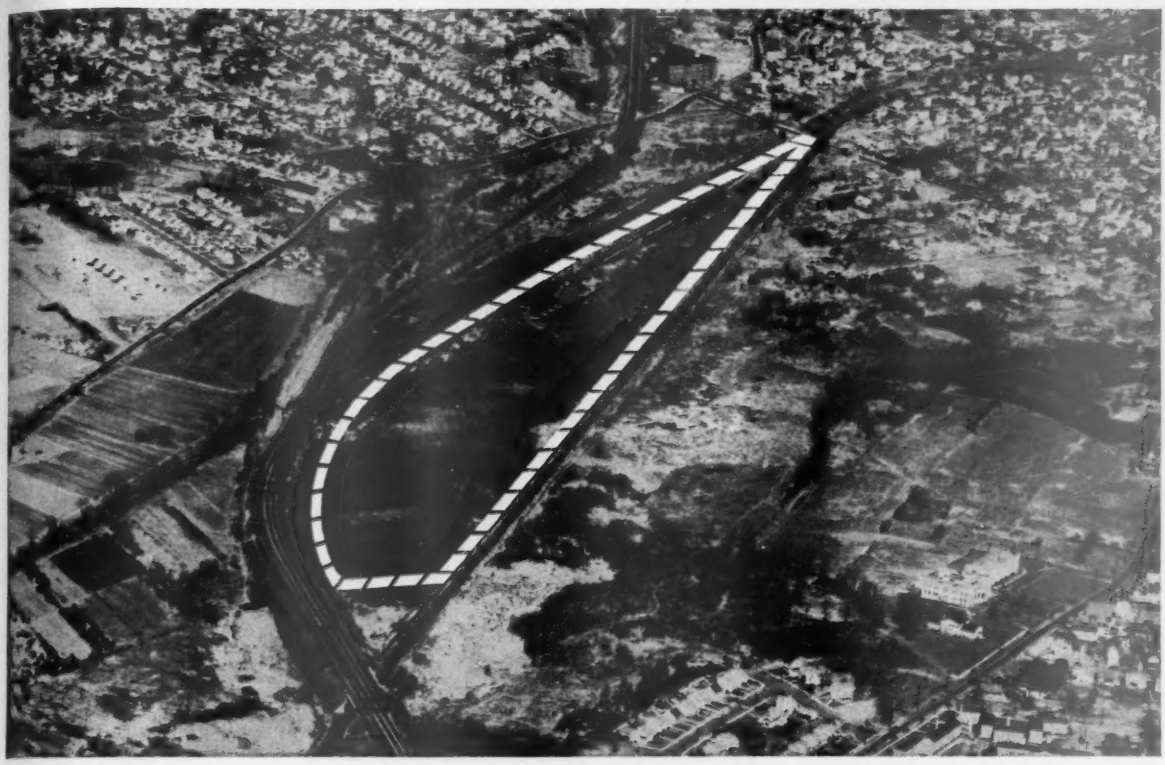
Last week, Romney showed off the first bid in this campaign. AMC bought exclusive manufacturing rights to a military vehicle, the "Mighty Mite," which is similar in function to the Jeep. Further development and marketing of this vehicle is up to Baits's Hudson Special Products Div.

• **Spreading the Word**—The story of American Motors' reorganization and plans for a comeback is being told all over the country to every audience Romney addresses. More information on the company has been spread in the past month than in the previous year.

Even so, Romney is having a hard time convincing many auto industry people. There is still a segment in Detroit inclined to brush him off as a caretaker of AMC until bankers can come up with a merger plan; others regard him as strictly on trial. If he doesn't show solid financial gains within six months, this line of talk runs, he'll either be eased out by the directors or they will seek a merger.

George Romney, however, doesn't brush off easily, he tries to hide it, but nevertheless he can't conceal his belief that many things in American Motors formerly were not done right or not done at all. So he's trying to turn the whole corporation around. In some measure he already has succeeded. There is more vigor demonstrated throughout; every night lights burn late on the third (executive) floor of AMC's Plymouth Road headquarters in Detroit.

In everything Romney does he's the picture of a young man who has schooled and trained himself to run a half-billion dollar business and now that he's got the chance he doesn't intend to muff it.



36 ACRES

About 12 miles from New York City

Unusual opportunity—one of the few remaining railroad-served sites in this area!

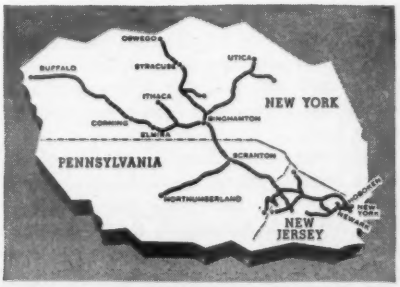
• This highly desirable property was formerly a railroad yard. Located at Clifton, New Jersey, it is close to the Lincoln Tunnel, the Holland Tunnel and the George Washington Bridge. Check these facts against your needs:

- DL&W sidetracks now installed; adjacent to Garden State Parkway and near Route 46.
- Electric power, water, gas and sewers at property line.
- Adjacent to Group IV labor area.
- Zoned for heavy industry—can be divided.

Confidential information, in detail, about this and other desirable plant sites in Lackawanna Land, will be sent without obligation. Please write or call:

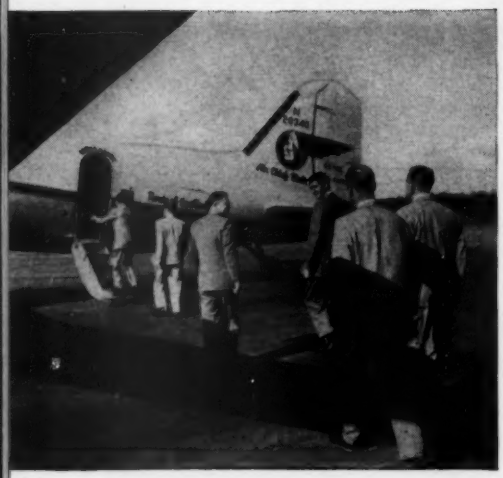
INDUSTRIAL DEVELOPMENT DEPARTMENT,
Room 1773, 140 Cedar Street, New York 6, New York
Phone BArclay 7-2500

LOCATE IN LACKAWANNA LAND



Lackawanna Railroad

SHORTEST RAIL ROUTE BETWEEN NEW YORK, BUFFALO AND THE WEST



Heading into the wilderness, aircraft parts buyers and engineers board a chartered plane to fly to Aero Supply Corp.'s out-of-the-way plant in Corry, Pa. Aero, recently in trouble, wanted its customers to see how its . . .



NEW PRESIDENT William Coleman (standing), who took control a year ago and has been wielding a big broom ever since, is getting his company into ship-shape order.

A $5,000 Junket Puts Supplie

The plant tour has developed into one of the most popular of public relations and selling devices. Its inherent problems—timing, who to ask, what to say—have long since been polished to smoothness by specialists.

But when your plant is off the beaten track, miles from population centers and lines of communication, you have a problem bigger than any of these. How do you get people there in the first place?

That's the fix Aero Supply Mfg. Co., was in. Aero Supply is an aircraft and automotive parts supplier (mostly hardware and fuel systems) in Corry, Pa., a town of around 8,000 people, located some 40 miles from Erie, Pa. A traveling man will tell you that Erie is not the most accessible place on the map, and if you ask him about Corry, he'll groan and tell you the old gag that winds up with "you can't get there from here."

• **Airborne**—Aero Supply, as the pictures testify, solved its problem a few weeks ago by chartering two DC-3s from Mohawk Airlines to fly its guests from Baltimore and New York to Erie, and by chartering two buses for the haul from Erie to Corry. Some of the guests were on the go—portal to portal—20 hours or more. But Aero Supply had its plant tour.

The junket cost Aero Supply $5,000. But the company's new 37-year-old president, William H. Coleman, felt he had to spend the money because Aero Supply has far worse troubles than just being situated in an out-of-the-way town.

The company's 60 guests were purchasing agents, buyers, and engineers from its customers—mostly aircraft and engine makers—in the East. Coleman



NEW ENGINEERS hired to reinforce the company's small technical group, are developing . . .



NEW PRODUCTS such as this fuel splash control. To attract good men, Aero upgraded engineers' salaries.

Back on the Map

wanted to prove to them that Aero Supply is clambering out of the manhole it disappeared into over a year ago.

• **Aero's Plight**—The customers' people made the trip because they wanted to find out what had happened at Aero Supply. The company had been a leader —once. It had parts on the old World War I Liberty engine and on the Spirit of St. Louis. During World II, it had a top year of $20-million in sales. It faltered, with the industry, in the early postwar years, but unlike many it failed (except in 1951) to respond to the Korean War stimulus. The final blow came in the summer of 1953, when the plant was shut down for a 13-week strike.

The strike had been long brewing, according to one Aero Supply executive. "It came down to a question of who's going to run the company, the management or the union. It wasn't over wages, just an accumulation of petty difficulties" he says.

The union-company relationship was what you might expect in a small town. Aero Supply, as No. 1 employer in Corry, was in a strong position. But it

He'll proudly wear your executive gift!

norma®

world's first and only

4-in-One Pen-Pencil

Important people on your Christmas list will appreciate this smart gift. Provides the convenience of a pencil that writes in 3 colors plus a smooth-writing pen—all in one flawless instrument. Can be engraved with company or individual name. Unconditionally guaranteed for mechanical perfection by Norma — makers of Norma Multikolor Pencils, famous for over 25 years.

$5.95 in Chrome
Fed. tax incl.
Introductory offer
Extra 49¢ ink refill free

Norma 4-Color Pencils $5 (F.T.I.) to $100*—in Chrome, Monel, Rolled Gold Plate, Sterling Silver, 1/10 Kt. Gold Filled and 14 Kt. Gold.
*Plus Fed. Tax

Click... WRITES BLACK!
Click... WRITES BLUE!
Click... WRITES RED!
Click... IT'S A PEN!

ACTUAL SIZE

NORMA PENCIL CORP.,
Dept. B, Norma Building
137 W. 14th St., N.Y.C. 11

Gentlemen: Please send detail and quantity prices on Norma 4-in-1 Pen-Pencil and 4-Color Pencils.

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE_____

50 million reas

"Well done!"



for saying

This week General Motors is celebrating the production of its 50 millionth automobile. We at National Steel join the many thousands across the nation in saying, "Congratulations, General Motors . . . and well done!"

We are especially pleased at this automotive event because it symbolizes for us the progress of American industry and its ever-increasing contribution to our country's higher standard of living.

Within a few score years the growth of industry has reshaped our way of life. From a nation of isolated farms and small communities we have grown into a nation on wheels. Americans travel more, see more, do more, than any other people on earth. The automobile industry can justifiably be proud of the important part it has played in this over-all progress.

General Motors' 50 millionth car is a brilliant milestone—a shining token of good things to come . . . because the wheels are still turning, the future is bright. Nothing is so powerful as progress on the march.

Here at National Steel, too, we are moving ahead. Within the National Steel organization is every resource and facility for the transformation of ore into six million tons of ingot steel each year. National's mines and quarries yield the raw materials. National's boats, barges and trucks transport them. National's furnaces and mills melt, roll and finish its wide range of steel products.

National Steel is a major supplier of standard and special carbon steel products, and is the world's largest supplier of cold-rolled sheet steel used in quantity in automobile manufacturing.

National Steel's growth has been constant—and its ability to serve keeps pace with industry's needs. National's plans for the future call for even greater development over the years to come . . . so that National Steel can continue to say . . . *Serving America by Serving American Industry.*

NATIONAL STEEL CORPORATION

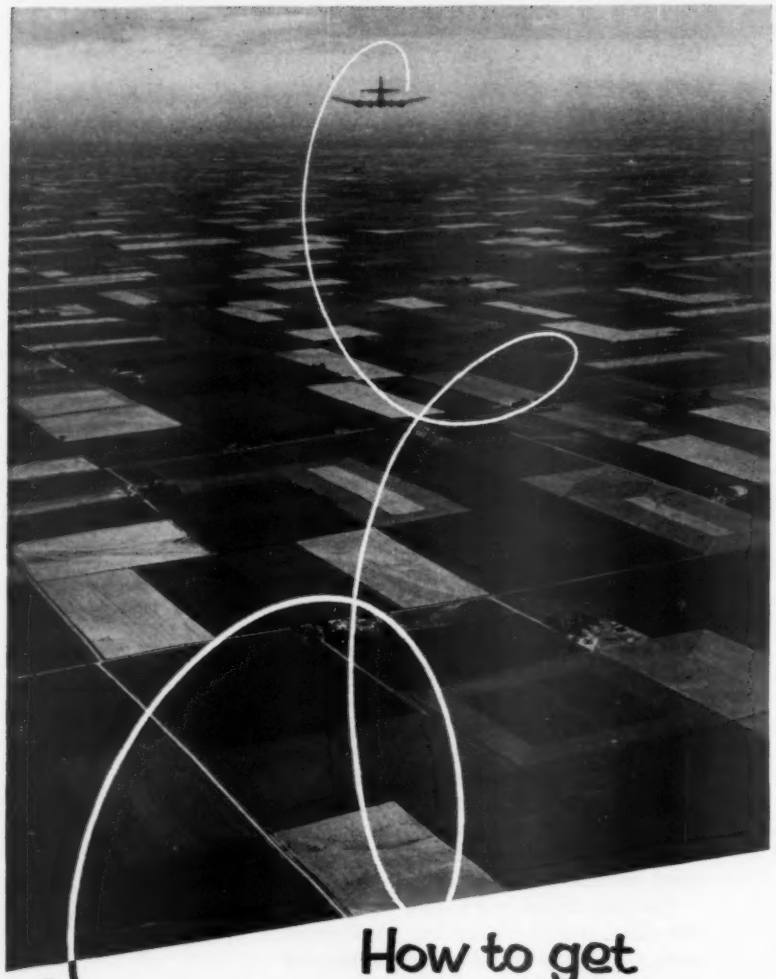
GRANT BUILDING PITTSBURGH, PA.

SEVEN GREAT DIVISIONS WELDED INTO ONE COMPLETE STEEL-MAKING STRUCTURE

GREAT LAKES STEEL CORPORATION • THE HANNA FURNACE CORPORATION

WEIRTON STEEL COMPANY • HANNA IRON ORE COMPANY • NATIONAL STEEL PRODUCTS COMPANY

STRAN-STEEL DIVISION • NATIONAL MINES CORPORATION



How to get new business that's hard to deliver!

BETTER SERVICE will be your best sale's tool in the tough competitive months ahead. Take this case: A printing customer of ours, looking for new business outside his usual territory, found a prospect. But to get the new business order he had to guarantee delivery of a prospectus of a stock issue to 1200 underwriters, in 400 cities, within 24 hours. We said we could do it, and he sold his prospect. Proof: 1200 messages confirming delivery!

Maybe you'll never have to handle a job like this but the ability to do so is the reason so many of America's major corporations have made Emery a factor in their plans. Emery provides the BIG-3 "musts" in moving goods—*control, predictability, maximum speed.*

Emery service includes these unique features that will enable you to meet growing competition . . . pickup and delivery, day or night . . . "fire department" runs . . . individual shipment control for tracing reports . . . delivery forecasts . . . Air Procurement and Timed Delivery services, special Assembly and Distribution privileges.

For this kind of Premium Service you would naturally expect to pay premium rates. But you may be paying more right now for ordinary service. Call us and get all the facts.

"Air Freight For Better Business"

EMERY AIR FREIGHT CORPORATION

New York 17: Offices or agents in all major cities and towns in the United States, also serving Alaska and Canada.



COLEMAN decided that it was time to let the trade in on the changes he has made.

faced at least three difficulties: (1) a local of the strong, well organized International Assn. of Machinists (AFL); (2) many of its foremen had friends and relatives in the rank and file; and (3) an up-and-down sales record due to the vagaries of the postwar aircraft business.

• **New Blood**—Through the strike, Aero Supply was headed by its longtime president, Sam J. Irvine, a Scotsman, World War I combat flyer, former barnstormer, and one of the aircraft industry's pioneers. Irvine says now that it was hard for him to change and adapt to new ways; but he knew that some big changes were due. "We wanted new blood. We realized it. And we reached out and got it."

In reaching, Irvine laid his hand on Coleman, a young Cleveland industrialist who in 10 years had built up Coleman-Petterson Corp., a wire products maker, from the ground to $1-million sales. But Irvine and Coleman recognized that the kind of changes necessary at Aero Supply called for a man with more than just the sanction of the former president. There would be directors and managers to contend with.

Partial ownership was the answer. Irvine told Coleman that there was little stock in the hands of managers or directors but that Pierre du Pont held a large, the largest, block. Coleman wrote du Pont, made an offer, and soon after the strike ended last October, he was the principal stockholder and was made a director and chairman of the operating committee.

• **Improvements**—The strike had left a deep mark. Not only was morale ruffled from top to bottom, but Aero Supply lost caste with its customers because it couldn't deliver. Also, as a



Thousands of hard of hearing people were first to hear the news:

The story broke on Sunday, October 24, 1943.

That was the day Zenith's president, Commander E. F. McDonald, Jr., challenged the industry with the introduction of a high quality hearing aid selling at $40.00. At the time prices for hearing aids ranged from $150.00 to $200.00. Zenith argued that price alone was depriving millions of the assurance and comfort of a hearing aid . . . and that prices were far higher than manufacturing costs warranted.

The industry itself proved a little hard of hearing, which was perhaps not surprising. There were predictions that Zenith would not be in the hearing aid business for long. Our answer was to intensify our Crusade to bring the best hearing to the hard of hearing public at a reasonable price—without exorbitant profit. In other words, lower the cost of hearing.

Today the Crusade is still growing. The hard of hearing have joined our Crusade to the extent that Zenith today is providing more hearing aids than all other thirty-seven manufacturers combined. Zenith has brought these people advances such as the first low-priced 3-transistor set operating at just 15 cents a month compared to several dollars for vacuum tube aids.

It's not an unusual story as far as our operations here at Zenith are concerned. In no phase of our business (which is radionics exclusively) do we accept the accepted way of doing things without first asking a lot of questions. The result has been a constant flow of radionic products that each year work better and cost less.

There have been important benefits to the Government as well. At the time Zenith Hearing Aids were introduced, this nation faced a critical wartime shortage of both labor and materials. But these new, low-priced hearing aids got an AA1 priority . . . because the Government saw a way to add thousands of hard of hearing people to the war effort. This was just one of the many ways in which Zenith helped . . . and is still helping . . . strengthen the nation's defense.

Zenith, backed by 36 years of specialization in radionics, serves America with a *stronger defense and a better way of living.*

When additional production was needed during the Korean emergency, the Government looked to Zenith for production of proximity fuses. This trust resulted from Zenith's experience in radionics and World War II production records.

ZENITH®

The royalty of **RADIO, TELEVISION** and **HEARING AIDS**

Zenith Radio Corporation • Chicago 39, Illinois

COPR. 1954

SAVES HEAT AND TIME...



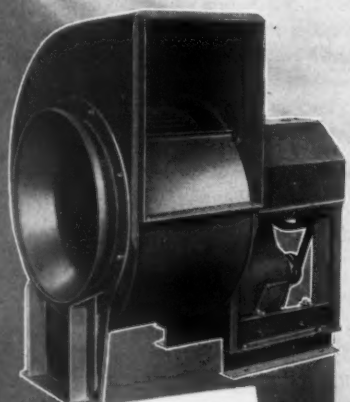
This Wellman Cover Carriage of a steel mill soaking pit opens and closes the pit smoothly and quickly, minimizing ingot heating losses and saving time. Wellman equipment and services have improved materials handling efficiency in many ways . . . in many industries. Find out how they can help *you! The Wellman Engineering Company, 7018 Central Avenue, Cleveland 4, Ohio.*

WELLMAN
ENGINEERING COMPANY·CLEVELAND

HEAVY MATERIALS HANDLING EQUIPMENT
SPECIAL STEEL MILL MACHINERY
"WILLIAMS" CLAMSHELL BUCKETS
MECHANICAL GAS PRODUCERS
"ANKER-HOLTH" AIR AND HYDRAULIC CYLINDERS
WELLMAN-BROWNING LOCOMOTIVE CRANES

PACKAGED "LUNGS"

for answering economically your smaller air handling requirements



CLARAGE Ready Units, distinguished by several unique features, are your logical choice for virtually any indoor or outdoor air handling assignment within their range (to 12,000 cfm).

They're highly efficient, compact, quiet. AND, like all other Clarage equipment, you can RELY on them for dependable, economical service.

97 of the 100 LARGEST CORPORATIONS IN AMERICA USE CLARAGE EQUIPMENT

CLARAGE FAN COMPANY
Kalamazoo, Michigan
Canada Fans, Ltd., Montreal, Canada



SAM IRVINE, chairman, says, "We wanted new blood. And we reached out and got it."

result of the unproductive quarter, the company was headed for a slight loss for the year.

Coleman started sweeping hard. Among other things here's what happened:

• Several new managers and department heads were hired. Key executives were moved off the open floor and into private offices. And the top 30 executives were psychologically tested by Worthington Associates, Inc. Coleman says there were too many cases of authority without responsibility.

• The company raised its engineers' scale of pay, to attract good men to the out-of-way town, built up a much larger engineering force.

• Management Consultant George Elliott was engaged to set up an incentive system. A new wage structure for office personnel was set up. And other morale boosters such as a house organ, company picnic, and service pins were started.

• A market survey and a product control study were made by Trundle Associates, Inc., and Arthur Andersen & Co., accountants, was hired to install a new cost system.

• **New Goals**—In April, Coleman was elected president, and Irvine moved up to board chairman.

The new engineers, old and new, were put to work on research—the goal being new products and better production methods. When Coleman figured the company had something to talk about, he decided to let the trade in on the changes he had made. He knew it would be months before the word "got around" that Aero was back on its feet, so he hit on the idea of a junket to Corry.

This week, Coleman says the trip produced "spectacular" results. The

SITUATION UNDER CONTROL — BY KEOKUK

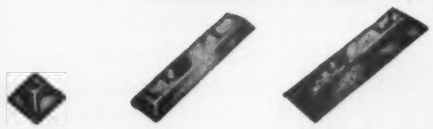


KEOKUK **K** **ELECTRO-METALS COMPANY**

KEOKUK, IOWA

WENATCHEE DIVISION, WENATCHEE, WASHINGTON

Smoke out high costs and control quality with Keokuk Silvery Pig Iron! Keokuk assures less waste and exact control of the melt through uniform silicon distribution. Car for car, pig for pig, its uniformity *never* varies. Charge Keokuk by magnet or count.



Keokuk Silvery . . . the *superior* form of silicon introduction for steel plants and foundries . . . available in 60 and 30 lb. pigs and 12½ lb. piglets . . . In regular or alloy analysis. Keokuk also manufactures high silicon metal.

SALES AGENT: MILLER AND COMPANY

332 S. Michigan Ave., Chicago 4, Illinois
3504 Carew Tower, Cincinnati 2, Ohio
8230 Forsyth Blvd., St. Louis 24, Missouri

LOOK WHAT

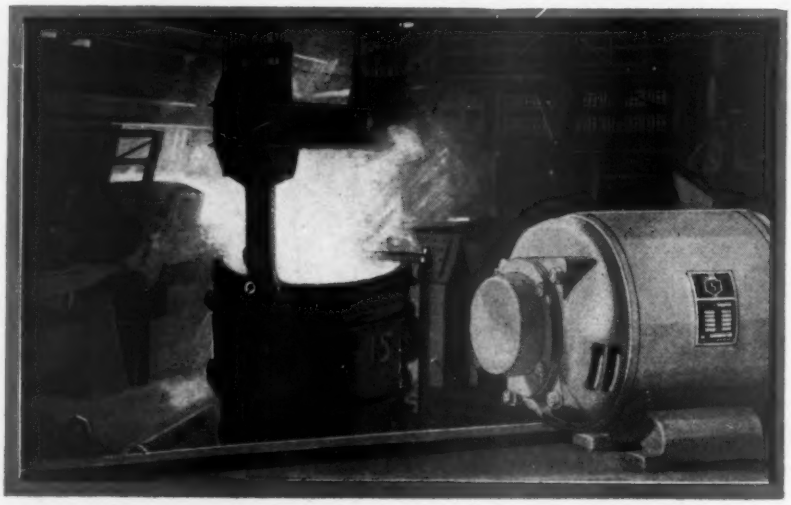
Linde Trade-Mark

SILICONES CAN DO FOR YOU

Many manufacturers are now looking to LINDE Silicones to give their products and processes new and improved qualities. Close cooperation with virtually every type of industry over the years has made LINDE particularly well qualified to adapt these new products of chemistry to your requirements.

LOOK HOW

THEY MAKE ELECTRIC MOTORS STAND UP ON TOUGHEST JOBS



Motors, transformers, insulated with LINDE Silicones, resist much higher temperatures, corrosive vapor, and moisture. New or rewound with LINDE Silicone insulation, they withstand severe abuse and overloads. Down time is practically eliminated. Maintenance costs drop. Those who want superior insulation should . . .

LOOK TO LINDE

FOR SILICONES

Linde AIR PRODUCTS COMPANY | A DIVISION OF UNION CARBIDE AND CARBON CORPORATION

30 EAST 42ND STREET UCC NEW YORK 17, N. Y.

In Canada: Dominion Oxygen Company, Division of Union Carbide Canada Limited

new products demonstrated at the Corry plant have aroused much interest at aircraft plants. He hopes they will spur sales next year. This year Aero Supply expects to sell over $7-million, its top since 1944.

Coleman admits he hasn't finished. He says Aero Supply is aggressively investigating two other business propositions—one that would expand its aircraft line, another that would provide diversification.

MANAGEMENT BRIEFS

Ford Foundation has awarded Harvard's B-School a $2-million grant to: (1) expand advanced training for business administration teachers; (2) encourage case method instruction; (3) aid basic research; (4) support use of behavior sciences teaching and research; (5) step up assistance for overseas centers for business training.

•

Two mergers apparently were off and another was on last week. Gaylord Container Corp. and St. Regis Paper Co. broke off talks on some sort of a tie-up. So did Botany Mills and Princeton Worsted Mills. In New England, Naumkeag Steam Cotton Co. and Indian Head Mills, Inc., are working out details of a combine.

•

Management got a break in a decision handed down in Wilmington, Del. The state's Court of Chancery ruled that stockholders protesting sale of the assets of Albercan Oil Corp. to Canada Southern Oils, Ltd., haven't the right to unrestricted search of corporation records to prove something wrong.

•

Adm. Alan G. Kirk, ex-ambassador to Russia, becomes president as well as chairman of the Mercast Corp., an affiliate of Atlas Corp. Kirk has been chairman for a year.

•

American Management Assn. announced that on Jan. 24 it will initiate a course in Executive Communication in New York. The three-part training program will continue through the year. Also for the first time, AMA is holding a national meeting in the Southeast. On Dec. 9, some 300 executives from industrial areas of the South will meet in Atlanta, Ga., for a two-day training conference.

•

Brockway Motor stockholders have approved the sale of most of their company's assets to H&B American Machine Co. (BW—Nov.13'54,p115). The vote at a special meeting showed 76% of the stockholders for the sale, none opposed.

Get full figuring *AUTOMATION with New MONRO*MATIC



Still Another New MONROE!

Here's another completely new Monroe—the very latest in fully automatic calculators.

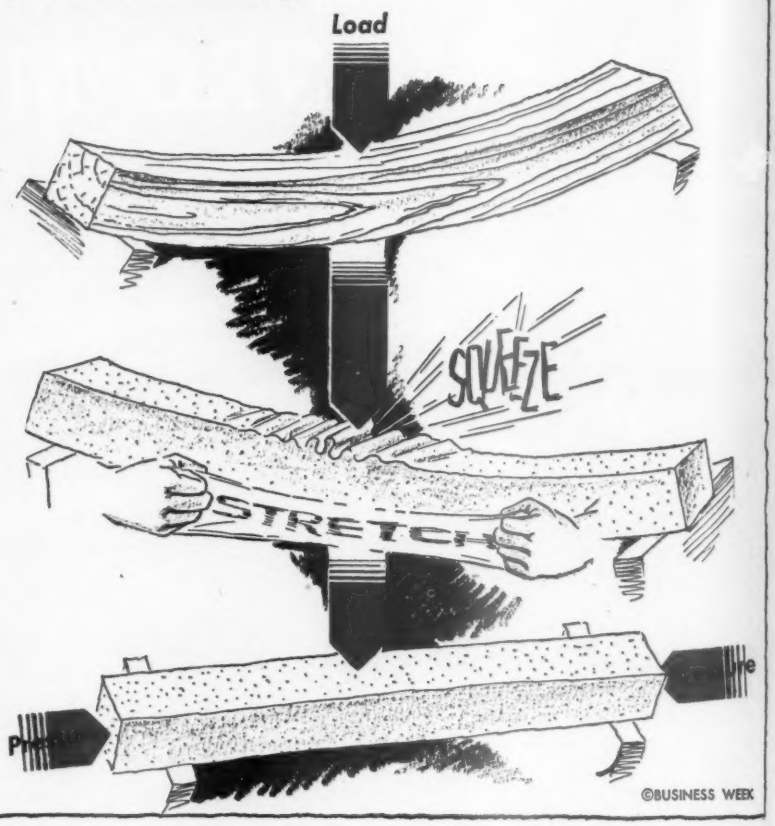
Take zeros for example, or decimals, just two of the many exclusive automatic features of the new Monroe Simplex 8N. Both flow automatically! Or, simply touch a single key to square a number automatically! Multiplication, division, addition, and subtraction...all your figuring work is turned out easily and with lightning speed, because it's done automatically. And, after each problem the carriage automatically positions itself for the next one!

Yet, the Monroe Simplex 8N is simplicity itself. Its single keyboard means more figures can be set with less motion. Cuts hours of figuring time to minutes. And with Automation doing most of the work, the operator bypasses hundreds of extra steps and intermediate operations.

Your Man from Monroe will explain how to get the most out of Automation. Let him show you how this new 8N Monro*Matic flies through your figure work. He's listed in your local classified telephone directory. Monroe Calculating Machine Company, Inc., Orange, New Jersey.

OPERATORS WHO KNOW... PREFER **MONROE** *CALCULATING, ADDING, ACCOUNTING MACHINES*

A Big Problem in Building



All beams will bend like this under a load in the middle

A concrete beam, which resists the load squeeze at the top, has no strength to resist the stretch at the bottom

SOLUTION:
Put pressure at each end of the concrete beam

Pre-Stressed Concrete Eases Load

Right now, pre-stressed concrete (see drawing above) is on the verge of becoming one of the hottest techniques in the building industry.

Once a second-best, when structural steel was short, pre-stressing is attracting more and more builders who pick it for its merits alone. The result is that its use has doubled in volume in the past year.

Specifically, pre-stressing is growing in two ways: (1) more of it is being used for bigger, costlier construction, and (2) its use has sparked the growth of a tiny but expanding fabricating business.

Here are two "firsts" that construction men point to, as a sign of pre-stressing's growth:

• In Los Angeles, the Guy F. Atkinson Co. is putting the finishing touches on a pre-stressed, 4½-story office building for Richfield Oil Corp. The $1-million building is the tallest pre-stressed structure in the U.S., and the first of its kind for Los Angeles, says Engineering News-Record, a McGraw-Hill publication.

• Plants for making pre-stressed beams are springing up wherever contractors are adopting the technique. Freyssinet Co., Inc., New York City, has designed equipment for the operations, and licenses its use to prospective plant operators.

• **Load Factor**—Today, building designers have four basic materials to work with: steel, brick, concrete, and wood. In the engineering of a building, one big factor is the load—the weight from interior furnishings, machinery, and people—that's placed on the material. The load creates a strain in the material that can tear it to pieces. So the designer determines the strength and shape of the material he wants to use and allows a little extra as a margin for safety.

Take a concrete beam, either plain, or reinforced with steel rods. As the drawing shows, a weight causes two conflicting forces inside a concrete beam. The load makes the beam bend in the middle. The bending does two things: It compresses, or squeezes together the concrete in the upper sides; and it tenses, or stretches the material in the lower part.

• **Opposing Forces**—The compression force actually is a good thing. The squeezing makes the concrete stronger. But the tension can be destructive (unless a builder counteracts it with steel reinforcing rods). Too much tension will tear the bottom concrete apart, like stretching a rubber band beyond its limit.

Contractors have turned to pre-stressing their concrete to eliminate the two conflicting forces. In pre-stressing, a concrete beam has a group of steel strands, called tendons, running through



Steam locomotive designed and built in 1863.

You're depending on modern equipment today...

Are you sure you're using modern materials?

Like every businessman, you're aware of the cost of inefficient, outmoded equipment. But have you considered the cost of overlooking new raw materials? In every branch of industry, modern materials—like man-made fibers, alloy steels, plastics—have made possible cost-cutting improvements in products or processes.

Du Pont fibers and your product or process may be more closely linked than you've thought. For these new raw materials are doing jobs that fibers could never do before. Chemists have given them a remarkable range of properties . . . such as shock resistance and strength without stretch, essential in tow ropes and hawsers, for example. Each Du Pont fiber well deserves detailed investigation in terms of your own needs.

Send for fact-filled booklet about Du Pont fibers as basic materials for industry. It will tell you more about the properties of each fiber . . . show how others have used man-made fibers to improve a product or a process . . . suggest ways in which *you* can profit from this modern resource. Write to: E. I. du Pont de Nemours & Co. (Inc.), Textile Fibers Department, Section B, Wilmington 98, Del.

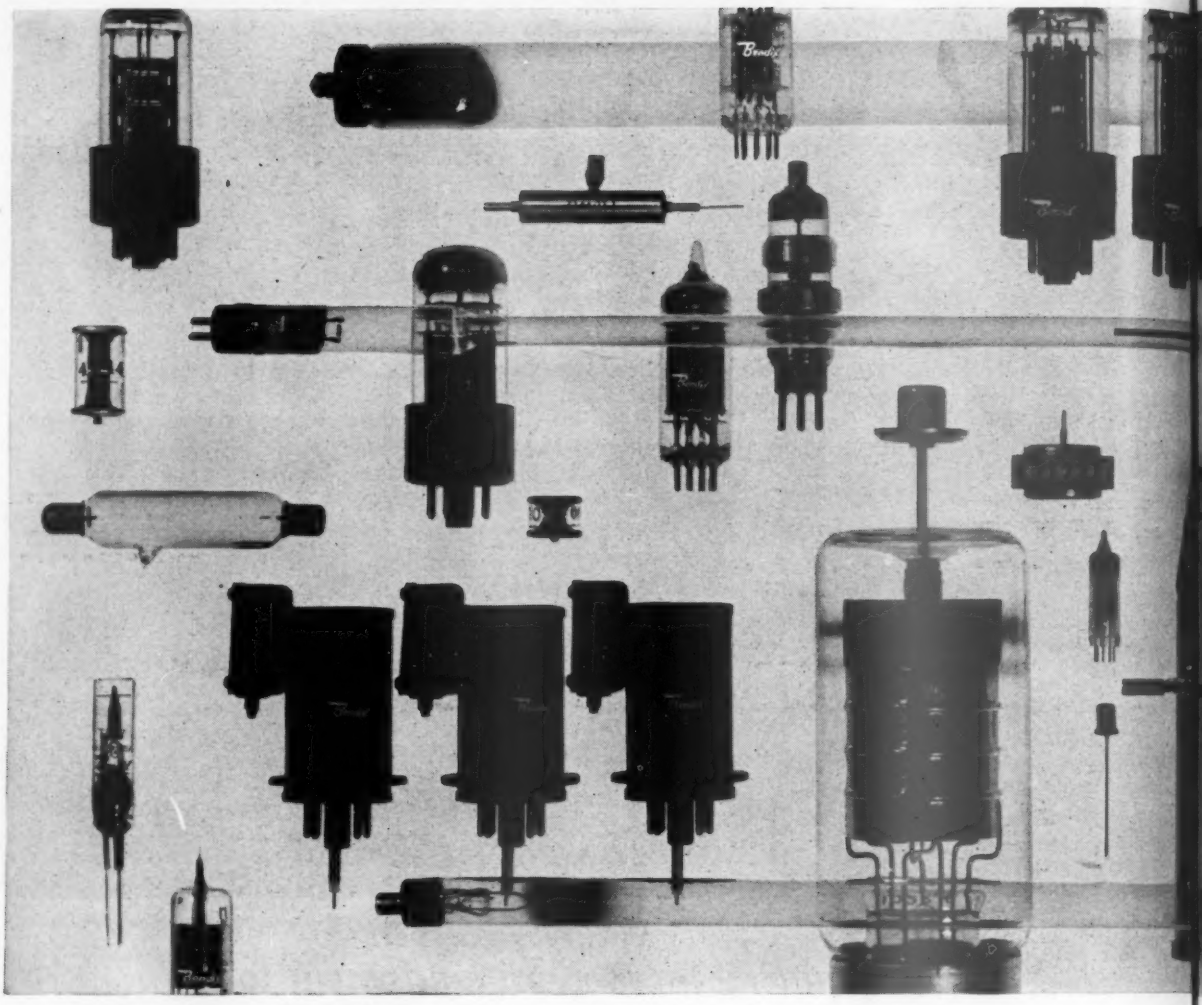
DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

DU PONT FIBERS: *new basic materials for industry*

NYLON • **CORDURA*** *high-tenacity rayon* • **ORLON*** *acrylic fiber* • **DACRON*** *polyester fiber*

*REG. U. S. PAT. OFF.



Bendix....a fine source for ru special purpose el

THIS is another business Bendix got into because we couldn't buy what we needed. Our own stiff requirements for electronic tubes for aviation, radar and guided missile use couldn't be met by ordinary tubes designed for home radio, public address systems, etc. As an example, we needed a certain tube for a guided missile that could momentarily withstand the shock of striking the target and penetrating it before firing the charge. It was no job for any ordinary tube.

What We Did About It

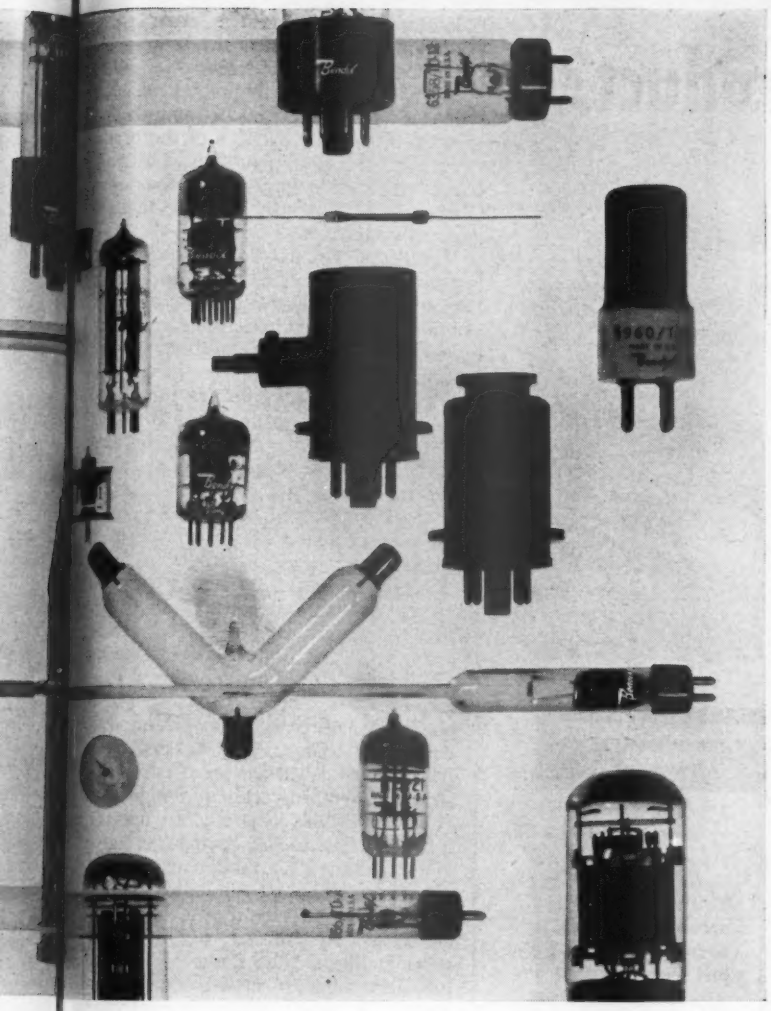
We developed a "ruggedizing" process which gives a bulldog physique to a normally fragile instrument. Today Bendix' ruggedized and special-purpose tubes are favored in all kinds of industrial and military applications because they outperform ordinary tubes and last many times longer.

How Ruggedizing Saves You Money

Satisfied customers have furnished us with many case histories proving the value of Bendix special-purpose ruggedized electronic tubes. A major aircraft manufacturer recently test-compared a certain type of Bendix tube with a radio-type tube it has been using. It not only saved money from the Bendix tube lasting 18 times longer but from the time saved not having to make 18 replacements.

Receiving . . . Microwave . . . Gas

Right now we make about 150 different types of special-purpose tubes which fall into three main categories: (1) Receiving and other special vacuum tubes, (2) Microwave tubes such as klystrons and noise sources, and (3) Gas tubes such as thyratrons, voltage regulators and spark gaps.



...ruggedized ...electron tubes!

For Specific Information

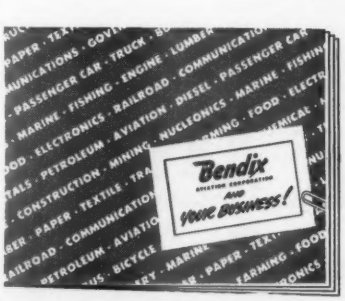
Please contact our Red Bank Division at Eatontown, New Jersey.

Complete Story of Bendix

It's best told in the 40-page brochure "Bendix and Your Business" which is yours for the asking. Kindly make your request on a company letterhead to the address below.

Engineers: "Bendix and Your Future" is another booklet available to men interested in an organization where engineering opportunity is unlimited.

BENDIX AVIATION CORPORATION
Fisher Building • Detroit 2, Michigan



THE NAME **Bendix** AVIATION CORPORATION MILLIONS TRUST

PRINCIPAL DIVISIONS AND BASIC PRODUCTS

RED BANK, EATONTOWN, N. J.
electron tubes; dynamotors, inverters; AC-DC generators.

BENDIX RADIO, TOWSON, MD.
radar; auto, railroad, mobile and aviation radio; television.

ECLIPSE MACHINE, ELMIRA, N. Y.
bicycle coaster brakes, Stromberg carburetors, electric fuel pumps, starter drives.*

SCINTILLA, SIDNEY, N. Y.
aviation ignition systems; industrial engine magnetos; diesel fuel injection; electrical connectors; ignition analyzers.

ZENITH CARBURETOR, DETROIT, MICH.
automotive, marine and small engine carburetors.

BENDIX-SKINNER, DETROIT, MICH.
micronic filters.

PACIFIC, NORTH HOLLYWOOD, CALIF.
telemetering equipment; hydraulic and electric actuators; depth recorders; boat steerers.

BENDIX FRIEZ, TOWSON, MD.
meteorological instruments, precision instruments and recorders.

BENDIX PRODUCTS, SOUTH BEND, IND.
automotive brakes, carburetors, power steering; aviation brakes, landing gear, fuel metering.

ECLIPSE-PIONEER, TETERBORO, N. J.
aviation instruments and components; foundry.

MARSHALL-ECLIPSE, TROY, N. Y.
brake blocks, brake lining, synthetic resins.

CINCINNATI, CINCINNATI, OHIO
automatic viscosity regulators, nuclear products.

BENDIX COMPUTER, LOS ANGELES, CALIF.
digital computers.

HAMILTON, HAMILTON, OHIO
jet engine controls and aircraft pumps.

LAKESHORE, ST. JOSEPH, MICH.
power steering and automotive devices.

UTICA, UTICA, N. Y.
aviation components.

MONTROSE, SOUTH MONTROSE, PA.
aviation components.

PIONEER-CENTRAL, DAVENPORT, IOWA
aviation instruments and components; ultrasonic cleaners.

YORK, YORK, PA.
electronic devices; test equipment.

BENDIX-ECLIPSE OF CANADA, LTD.
Windsor, Ont.

BENDIX INTERNATIONAL
New York City

*REG. U.S. PAT. OFF.

Hard-to-Pack Product?

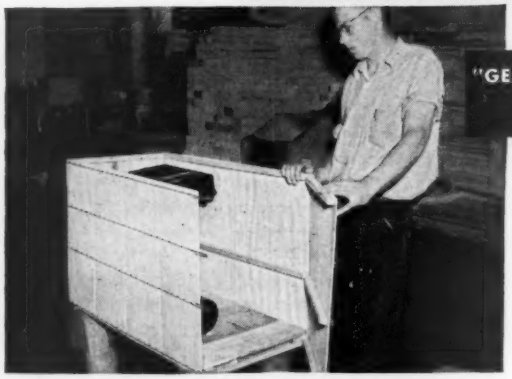
Call a

"General" Container Engineer!



OLD PACKAGING METHOD

It took a heavy nailed wooden box, ten pieces of interior blocking, 71 individually driven nails to prepare this water level control valve for shipment.



"GENERAL ENGINEERED" METHOD

3 steel straps tie valve to specially designed base. Sturdy lightweight wire-bound mat wraps around base. Top is secured by driving just 4 nails.

RESULTS:

PACKING TIME CUT 60%
SHIPPING WEIGHT CUT 10%
CONTAINER COSTS CUT BY $1,500 TO $2,000 A YEAR!

Those were the results on *just one item* when Fisher Governor Company of Marshalltown, Iowa, called in a General Container Engineer. Our field engineers, backed by well-staffed, well-equipped laboratories, give you the *best* packaging at the *lowest* cost. *Write for your free copy of "The General Box"—or have one of our engineers call.*

Engineered Containers for every shipping need

Factories: Cincinnati; Denville, N. J.; East St. Louis; Detroit; Kansas City; Louisville; Milwaukee; Prescott, Ark.; Sheboygan; Winchendon, Mass.; General Box Company of Mississippi, Meridian, Miss.; Continental Box Company, Inc., Houston.

General Box

GENERAL BOX COMPANY, 1805 MINER STREET, DES PLAINES, ILL.

★ ★ ★ ★ ★

it from one end to the other. The tendons are tightened up to a great tension of about 150,000 psi., either before the concrete is poured, or after it has set. That puts a compressing force on the whole length of the beam. And under a load in an actual building, the compression from the tendons overcomes the opposing force of the destructive tension.

• **Builders' Choice**—In the beginning, pre-stressed concrete was tried out in simple construction jobs such as short bridges, and roof supports for one-story buildings. Many of the early jobs were during the steel shortage, when a customer might be hard pressed for a little extra office or manufacturing space. Construction companies found that pre-stressing was practical, and sometimes it passed a saving along to the customer. A pre-stressed roof might be half or two-thirds the cost of a conventional type in fireproofed construction.

More and more, contracting firms are picking pre-stressed construction when they get a choice. For instance, New Jersey's Garden State Parkway needed 12 bridges, for which builders were asked to bid. The contractors had a choice of either the usual reinforced concrete T-beams, or pre-stressed ones. All the bids called for pre-stressed construction, ignoring ordinary design.

Richfield Oil's new structure actually is an addition to the company's bigger office building. Its public entrance and elevator service are provided by the parent building. One reason the designers picked pre-stressing was to provide extra facilities. The floors of the two buildings had to match almost perfectly. There was limited vertical space to start with. But by using pre-stressing—the only reinforcement for the floor slabs—the designers got enough headroom for modern recessed lighting, and a high-velocity air-conditioning system. The old building doesn't have either of these facilities.

• **Choice of Methods**—There are two ways to stress concrete. "Post-tensioning" is the builders' term for the stressing method used in the Richfield job. Each of the floors and a half-story penthouse were stressed in both directions, along their length and width. The stressing was applied to the steel tendons after the concrete was poured. Widthwise, the builders could stress the slabs only from one end, because the other was smack against the older building.

For a while, builders went all-out for post-tensioning. The only real drawback to post-tensioning is that the beams require heavy expensive end plates to hold the tendons.

• **Pre-Tensioning**—Now, however, more and more builders are turning to pre-tensioning—which is done before the beam is put in place. It has no end



Truck body by Lunn Laminates Inc., Huntington Station, L.I., N.Y.

Heavy duty lightweight

PLASKON® Polyester Resins . . . first in the field

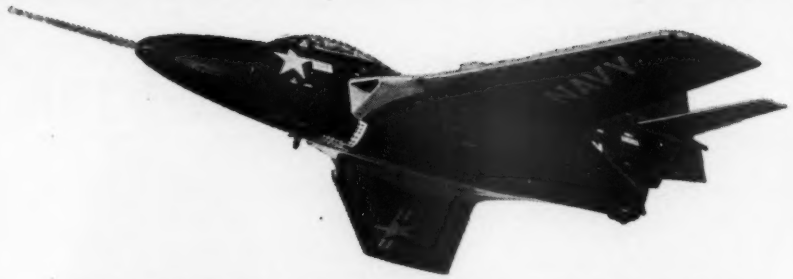
Imagine a truck body, as large as the one on this United Parcel Service delivery vehicle, that weighs only *650 pounds!* Hard to believe? Not when it's made of PLASKON Polyester Resin, reinforced with glass fibers. This combination is doing amazing things in the automotive industry. Truck and car bodies are being made that are lighter, stronger and easier to maintain than metal, and in many cases at lower production costs, too.

Our engineers are experienced in the application of plastic products in a tremendous variety of industries. Why not find out for yourself what PLASKON Polyesters and other plastics can do for you? Write or call your nearest Plaskon man today.

Barrett PLASKON

For further information on PLASKON Plastics and Resins, address BARRETT DIVISION, Allied Chemical & Dye Corporation, 40 Rector Street, New York 6, N. Y. Phone HAnover 2-7300.

Allied Chemical



SUPERSONIC DOGFIGHTS?

Navy's new Cougar has what it takes, AND...

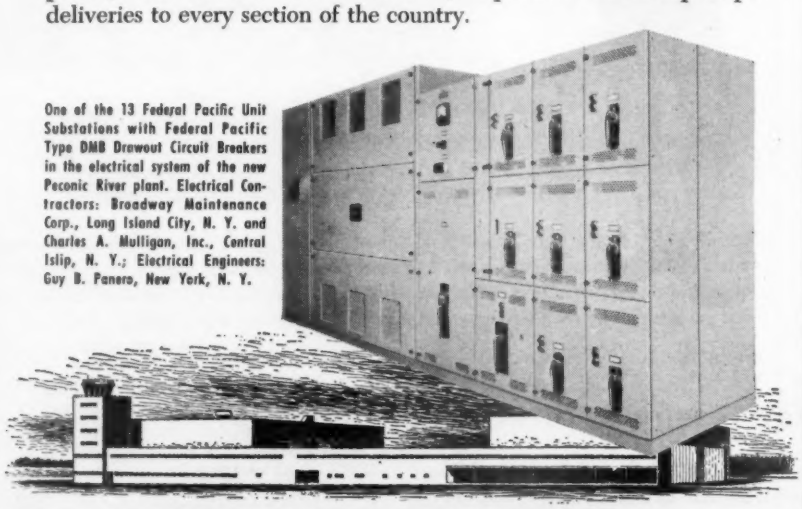
this faster, more maneuverable jet is in production at the Navy's new Peconic River assembly plant operated by Grumman Aircraft on Long Island. Modern to the last detail, the plant's distribution and control equipment for electric light and power is Federal Pacific throughout, assuring maximum dependability and providing plug-in power outlets at one-foot intervals wherever machines are used.

Spectacular growth

Federal Pacific in less than a decade has become one of America's major producers of a *complete* line of electrical distribution and control equipment. Much of this growth is the result of advanced engineering and design... introduction of developments that have set new standards for the industry and brought economies and greater service efficiency for the user.

Manufacturing plants across the U. S.

The fast-growing demand for Federal Pacific products has been met by the constant acquisition or building of new plants. Today eleven plants, from Connecticut to California, help assure full and prompt deliveries to every section of the country.



One of the 13 Federal Pacific Unit Substations with Federal Pacific Type DMB Drawout Circuit Breakers in the electrical system of the new Peconic River plant. Electrical Contractors: Broadway Maintenance Corp., Long Island City, N. Y. and Charles A. Mulligan, Inc., Central Islip, N. Y.; Electrical Engineers: Guy B. Panero, New York, N. Y.

FEDERAL PACIFIC ELECTRIC CO.

Formerly Federal Electric Products Co. and Pacific Electric Manufacturing Corp.

Main Office: 50 PARIS STREET, NEWARK 1, N. J.

Plants at Newark, N. J.; Long Island City, N. Y.; Hartford, Conn.; Cleveland, Ohio; St. Louis, Mo.; Dallas County, Texas; Scranton, Pa.; Los Angeles, Calif.; San Francisco, Calif.; Santa Clara, Calif. Affiliated plant, Toronto, Canada

plates. The tendons become bonded to the concrete as it sets.

You can also say a few things against pre-tensioning. To justify the cost of equipment for the stressing operation you need fairly high demand. It takes slightly more manpower than the other method. And, as the concrete ages, there's a greater loss in the stressing from shrinkage.

But there is one main advantage to pre-tensioning. Beams made that way are easier to mass-produce. Freyssinet Co., Inc., a leading consultant in pre-stressing, has worked out a kind of packaged plan for getting into the business. It has a design for pre-stressing equipment that can produce a variety of pre-tensioned concrete beams. Freyssinet licenses a fabricator to set up a plant using this design. One pre-tensioning unit costs around $2,000. A complete plant—actually an assembly yard—runs from $25,000 to $100,000.

The company charges a service fee, in addition to the one for the designs. This service fee varies, but often runs about 2% of the selling price of the product. In return, a licensee gets exclusive production rights for his area, and up-dating reports on the latest advances in pre-stressing methods.

PRODUCTION BRIEFS

Largest steam turbine generator in the world with a 300,000-kw. capacity, has been ordered by Detroit Edison Co. Foster Wheeler Corp. will build the generating equipment, Allis-Chalmers the turbine. The generator will top Philadelphia Electric's 275,000-kw. unit, now being built by Westinghouse (BW—Sept.18'54,p41).

•

Old mill, new hands: The Stanley Works, Bridgeport (Conn.) manufacturer of specialty steels, is selling its cold roll strip mill. The purchasers: The Mailmans brothers, former owners of the Personna and Pal razor blade companies. Stanley will shift its cold roll steel operations to New Britain, Conn.

•

Foam rubber capacity of Hewitt-Robins, Inc., has been increased more than 50%. A new $1.5-million production line at its Fremont (Ohio) plant turns out the foam in a continuous 72-in.-wide sheet.

•

Municipalities may lose money if they try to make fertilizer of the sludge from their sewage disposal plants, Ohio's State Water Pollution Control Board warns. Sludge, says the board, isn't a true fertilizer—it's only a base that must be further treated and enriched to be salable.



Eliminates 3 costly operations with DENISON® MULTIPRESS

Three time-consuming operations eliminated.

Production doubled.

A better product at less cost.

. . . all because of a switch to Denison hydraulic Multipress.

At The Nye Rubber Company, Barberton, Ohio, the old method for trimming flash from molded rubber wheels required cutting, freezing, tumbling, buffing and washing—with parts loaded and unloaded by hand for each operation. Now, a 4-ton Multipress trims flash automatically.

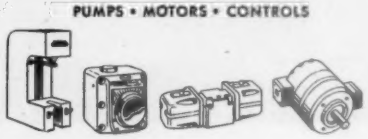
The operator simply loads parts, which are carried under the ram by a Denison Index Table. One smooth hydraulic stroke trims the flash neat and close. Air blows the finished product down a chute for packing. The rate for one operator: 2400 parts an hour.

A switch to Denison Multipress could cut costly operations in your plant. Write for cost-cutting ideas and technical bulletins.

THE
DENISON ENGINEERING COMPANY
1238 Dublin Road • Columbus 16, Ohio

DENISON *hydr*OIL*ics*

HYDRAULIC PRESSES
PUMPS • MOTORS • CONTROLS



Bell Making

The delicate art of bell casting and tuning has gained from modern production methods of maker, Gillett & Johnston, Ltd. The British-made bell (left) is one of three raised to belltower of Pittsburgh church.



1 Bell mold is built up of firebrick and sand against a template at Gillett & Johnston's Croydon works.



4 Clay core and cope (outside mold) are removed from cast bell, which is then cleaned by workers for tuning.

Old Craft with a Modern Touch

Pittsburgh's Sacred Heart Church is sounding a new note this week in peaceful contrast to the roar and crash of steel mills which most people associate with the city.

The new tones come from three specially tuned bells, recently arrived from England and installed in the church's newly constructed 140-ft. bell-tower at a cost of more than $20,000.

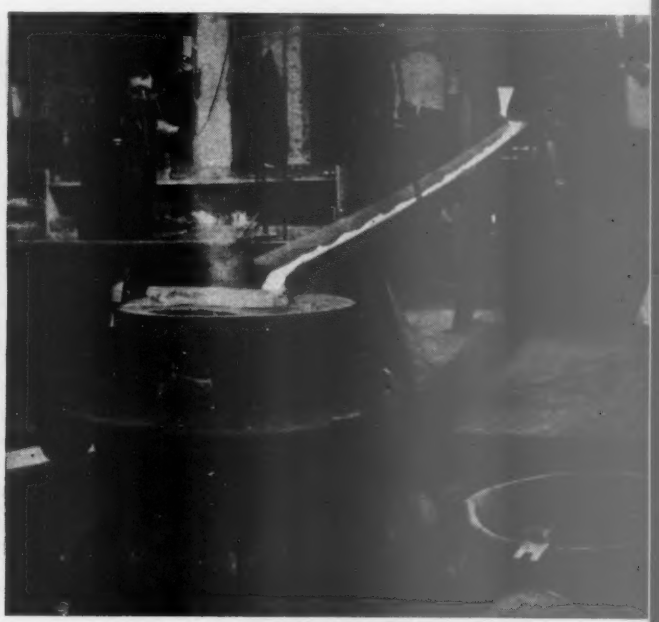
The bells were made by Gillett & Johnston, Ltd., of Croydon, England—probably the best known of six European firms that make up the highly technical industry of bell casting. G&J has supplied tuned bells to many U. S. churches, including the 72-bell carillons at New York's Riverside Church and the Chapel at the University of Chicago.

• **Craftsmanship**—Today, bell-tuning is a trade practiced with all the care and pride generally associated with a centuries-old craft. Actually, it's a relatively modern business and relies on up-to-the-minute tools and techniques.

For centuries, bell makers had been



2 Inscription is embossed by craftsman on inner surface of mold, which is then taken to casting floor.



3 Pouring metal into mold is tricky business. Finished casting is later cooled for as long as 24 hours.



5 Tuning is done by series of delicate cuttings with a 9-ft. boring mill. If too much metal is removed, bell is ruined.



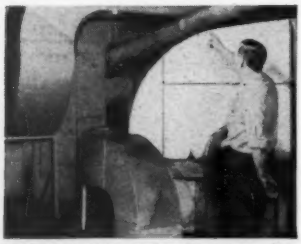
6 Finished bell is checked against tuning forks for proper pitch, are tuned to harmonies of bell's base note.

Republic Steel Can Help Y

REPUBLIC T

Republic knows how to help you fight corrosion

It is only natural that Republic should be a pioneer in Titanium. Since its very beginning, Republic has been studying the causes of corrosion and has become a foremost producer of metal products that resist the varying degrees of corrosive attack. Three of the best known are:



DUCTS of all types last for years when made of Toncan Iron.



REPUBLIC ELECTRO PAINTLOK helps protect this road sign against corrosion.



STAINLESS STEEL lengthens life of textile dye vats and dyeing machines.

ZINC-PROTECTED SHEETS

Republic produces a wide line of sheet steels protected by various zinc coatings. There are hot dipped galvanized steel sheets protecting the base metal with a tight coating of zinc. Galvannealed sheets have the zinc coating fused right into the steel—resist corrosion and provide an exceptional surface for paint. Electro Paintlok is the chemically treated, zinc-plated sheet that takes and holds paint, and protects the surface against underfilm corrosion.

TONCAN IRON

This metal has the highest rust-resistance of all ferrous materials in its price class. It is ideal for ducts, ventilators and other sheet metal applications. It is an alloyed iron containing twice as much copper as is ordinarily used in copper-bearing steels and irons, plus just the right amount of molybdenum to bring out the full effect of the copper. It has been on the job resisting corrosion in some installations for more than 40 years, and still is going strong.

ENDURO STAINLESS AND HEAT-RESISTING STEELS

Until the advent of Titanium, this family of steels ranked highest in the field of commercial corrosion-resistant metals. Stainless steels do a good job—and will continue to be the economical and practical solution to corrosion in many applications. Titanium goes a step beyond stainless steels, however, and should find effective use in those applications where unusually severe service warrants its higher cost.

REPUBLIC STEEL

REPUBLIC TITANIUM

AND TITANIUM ALLOYS

You Fight Corrosion with

TITANIUM

AND TITANIUM ALLOYS

If you have a costly corrosion problem, you will be vitally interested in Republic Titanium.

Titanium is the most corrosion-resistant commercial metal yet developed. Especially for chemical, marine and food processing applications where severe corrosion is a costly and continuing problem.

For example, salt water and marine atmospheres have no corrosive effect upon Titanium. Neither have acids like nitric and certain chlorine compounds. Think what tremendous savings that can mean when it comes to equipment life!

Titanium weighs only 56 per cent as much as steel. That can mean lighter weight or greater strength, as you desire. Additional savings!

Republic has been working with Titanium since 1948. We have the experience to help you work it, forge it, heat-treat it, machine it and anneal it. We're still discovering new techniques.

Republic metallurgists have been solving corrosion problems for the past thirty years. They'll be glad to tell you what Titanium will do—and will not do. They'll be glad to help you use Titanium where it will give you the most advantages.

Just let us know where you think Titanium might fit into your product or equipment. We'll take it from there. Call your nearest Republic district office. Or mail the coupon below.

REPUBLIC STEEL CORPORATION

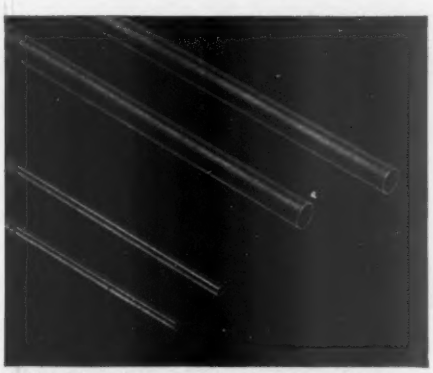
Alloy Steel Division • Massillon, Ohio

GENERAL OFFICES • CLEVELAND 1, OHIO

Export Department: Chrysler Building, New York 17, N. Y.



AMMUNITION BOX made of Titanium by North American Aviation is composed of stampings welded and riveted. Result: big saving in weight.



TITANIUM can be successfully made into tubing. Large diameter is welded tubing, small diameter is seamless. Food and chemical processing industries are large potential users.

LATEST FACTS ABOUT REPUBLIC TITANIUM



Republic Steel Corporation, Advertising Division
3136 East 45th Street, Cleveland 27, Ohio

Please send me your latest booklet on Republic Titanium and Titanium Alloys.

Name _____ Title _____

Company _____

Address _____

City _____ Zone ____ State _____

NEW IDEA



GOING UP... 1/2 ton of mortar!

Making light work of heavy lifting is Towmotor's job here . . . delivering a half ton of mortar to the work level in seconds. Your handling problem, inside or outside, can also be solved with Towmotor efficiency. Your nearby Towmotor representative is a materials handling specialist. Have him analyze your materials handling needs or write for special Job Studies covering *your industry*. TOWMOTOR CORPORATION, Div. 211, 1226 E. 152nd St., Cleveland 10, Ohio.

TOWMOTOR
THE ONE-MAN-GANG ®

FORK LIFT TRUCKS and TRACTORS
Since 1919



BELL MOUNTINGS are supervised by British technician. The bells cost $20,000.

trying to cast bells to exact pitch, but without noticeable success. During a brief period in the 17th Century, two Flemish brothers produced carefully tuned bells, many of which survive today. But they never revealed their secret, and it died with them. It seems likely that they had devised a metal-cutting method similar to those of a modern boring mill. The process was rediscovered in Europe less than 100 years ago.

• **Technique**—Bell making and tuning is an expensive business. Bell metal consists of 13 parts of electrolytic copper and four parts pure tin. The custom is to throw in a few gold or silver coins for luck at the time of casting.

After pouring and cooling, the bell goes to a tuning shop for the critical job of calibration. At G&J, this work is done by a two-man team: 69-year-old Jack Spraggett and his son, Walker. Teamwork widens their hearing range, since the elder Spraggett has with age lost some of his high-frequency perception but gained low-frequency perception, the reverse is true of his son.

• **Complications**—Final tuning of the bell is accomplished by taking off just the right amount of metal from the inside by means of a 9-ft. boring mill. This is where the job gets complicated. For any one part of the bell, it's a reasonably simple job to figure how much metal must be removed to get a certain frequency. But if metal is removed from one part, the over-all frequencies of the bell change proportionately.

Corrective cuttings must be counter-calculated against one another—a time-consuming task. If too much metal is removed from any one place, the bell is ruined, since it's impossible to restore any metal that is cut off.



Are you too busy to learn why the management of many firms will buy a $50,000 machine without batting an eye, and haggle over a $50 gage to go with it? It will pay you to find time to read the free booklet, "A Management Blind Spot."

Can You Spare 15 Minutes?

That's all the time required to read one of the most provocative booklets ever published . . . a factual analysis of the basic reasons why many factories fail to meet work specifications.

"A Management Blind Spot" is the title of this easy-reading booklet. Constructive criticism, softened by humorous cartoons, points out hidden profit leaks and how to stop them.

There's nothing theoretical about this booklet. It's based on studies of conditions in hundreds of plants. Until you read about them, you can't be sure that they don't exist in *your* plant. If they do exist, your reading of this booklet can very well be the first step toward higher quality standards at lower over-all costs. Several case histories show how other firms achieved profitable results.



Write for your free copy today. See how easy it is to save the money that may be winding up in the scrap barrel, the repair parts till or a salesman's expense account. Check your operations against the facts in "A Management Blind Spot". You can have this booklet, without cost or obligation, by return mail.

FEDERAL PRODUCTS CORPORATION
4211B Eddy Street • Providence 1, R. I.

Ask **FEDERAL**

FOR ANYTHING IN MODERN GAGES...

Dial Indicating, Air, Electric, or electronic — for inspecting, measuring, sorting, or automatically controlling dimensions on machines.



"JOB-FITTED COMBINATION SCRUBBER-VAC

PUTS FLOOR-CLEANING ON PRODUCTION BASIS

throughout our plant"



—*Says* Superintendent of Maintenance
VICTOR ADDING MACHINE COMPANY

Victor Adding Machine Company, Chicago, insists on maximum production in floor-cleaning as well as in manufacturing. Like other production-wise industrial concerns, *Victor* cleans floors with a *Job-Fitted Combination Scrubber-Vac!* This single unit

Completely Mechanizes Scrubbing

—applies the cleanser, scrubs, flushes if required, and picks up — *all in one operation! Job-fitted* to specific needs, a *Scrubber-Vac* provides maximum brush coverage. *Model 213P,* shown in illustrations at left, is designed for heavy duty scrubbing of large-area floors. It has a 26-inch brush spread, and cleans up to 8,750 sq. ft. per hour! *Finnell* makes still larger sizes — in *gasoline* as well as *electric* models — and also sizes for smaller operations. From this complete line, you can choose the *Scrubber-Vac* that will put *your* floor-cleaning on a production basis and reduce labor costs. And you can lease or purchase the machine. Maintenance men like the convenience of working with a *Scrubber-Vac.* This *all-in-one* unit is *self-propelled,* and there are no switches to set for *fast* or *slow* — slight pressure of the hand on clutch lever adjusts speed to desired rate.

It's also good to know *there's a Finnell Floor Specialist and Engineer nearby* to help train your operators in the proper use of *Finnell Equipment* and to make periodic check-ups. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 3811 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.
Originators of
Power Scrubbing and Polishing Machines
FINNELL
BRANCHES IN ALL PRINCIPAL CITIES

NEW PRODUCTS

Waste Goes to Work

It takes a couple of pounds of timber to produce a pound of cellulose, because there is so much waste in the raw material. For more than a year, Rayonier Inc., one of the biggest cellulose producers in the U.S., has been looking for a way to use some of that waste (BW—Jul.4'53,p126).

Last week, Rayonier announced that its Research & Development Div. had developed a product from the waste material that can go to work for the oil industry.

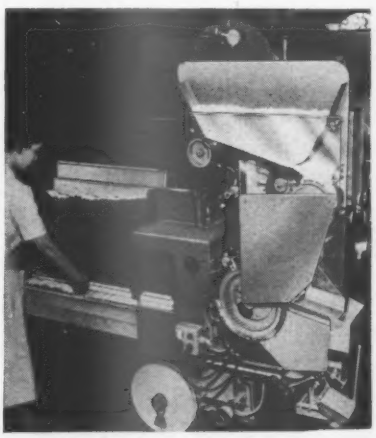
The product is called Rayflo. It's a reddish-brown powder that is said to make oil well drilling easier.

In the oil fields, drilling teams use fluids—called "muds"—to lubricate the drilling tool as it bores into the earth. As the drill goes deeper, the mud has to be dense, yet fluid enough to be pumped and recirculated. So the drillers add a thinner to the mud to maintain the density and keep the mud fluid.

Rayonier's new powder—Rayflo—is used as the thinner. Up to now, oil companies have had to import a South American wood product, quebracho, to do this job.

The company says that it can easily produce as much thinner as the domestic oil industry needs, and that its new product will perform as well as quebracho, and won't cost so much.

• *Source: Rayonier Inc., 161 East 42nd St., New York 17.*



Faster Filter-Tipping

American Machine & Foundry Co. has announced a new machine, costing about $13,000, that can filter-tip cigarettes at a rate of 1,200 per min. The tipper, shown in action above, is said to require neither additional floor space nor more personnel, since it becomes an integral part of the cigarette making



Big break for the breadman!

Modern bakery-goods packaging and handling methods are a big help to the route man . . . save time in deliveries, help increase sales and profits. This picture illustrates three good examples: the bread is wrapped in Fabricon's Waxello, a printed opaque waxed paper that is low in cost, high in packaging value, wide in popular eye-appeal. Likewise, specialty breads, rolls, and buns are wrapped in Fabricon's Printed Cellophane.

Both waxed paper and printed cellophane wrappers are attractively designed by Fabricon's own staff of creative packaging specialists to help make bread "sell itself." Many bakery products are delivered on Fabricon's Fiberglass Trays. These trays are a part of a unique tray-loading system that many bakeries are using to help eliminate excess handling and squeezed, packed-down bread.

These three products, boons to modern baking packaging and handling, are manufactured by the Fabricon Division of Eagle-Picher. Inquiries addressed to Fabricon Products, 1721 Pleasant Avenue, River Rouge 18, Michigan, will receive prompt attention.

You will find Eagle-Picher a dependable source, not only for these items, but for all of the products listed below. We'd be glad to have the opportunity to discuss any of them with you. Simply send us your name, address, and the products you're interested in. We'll reply promptly.

Since 1843

EAGLE EP PICHER

EAGLE-PICHER

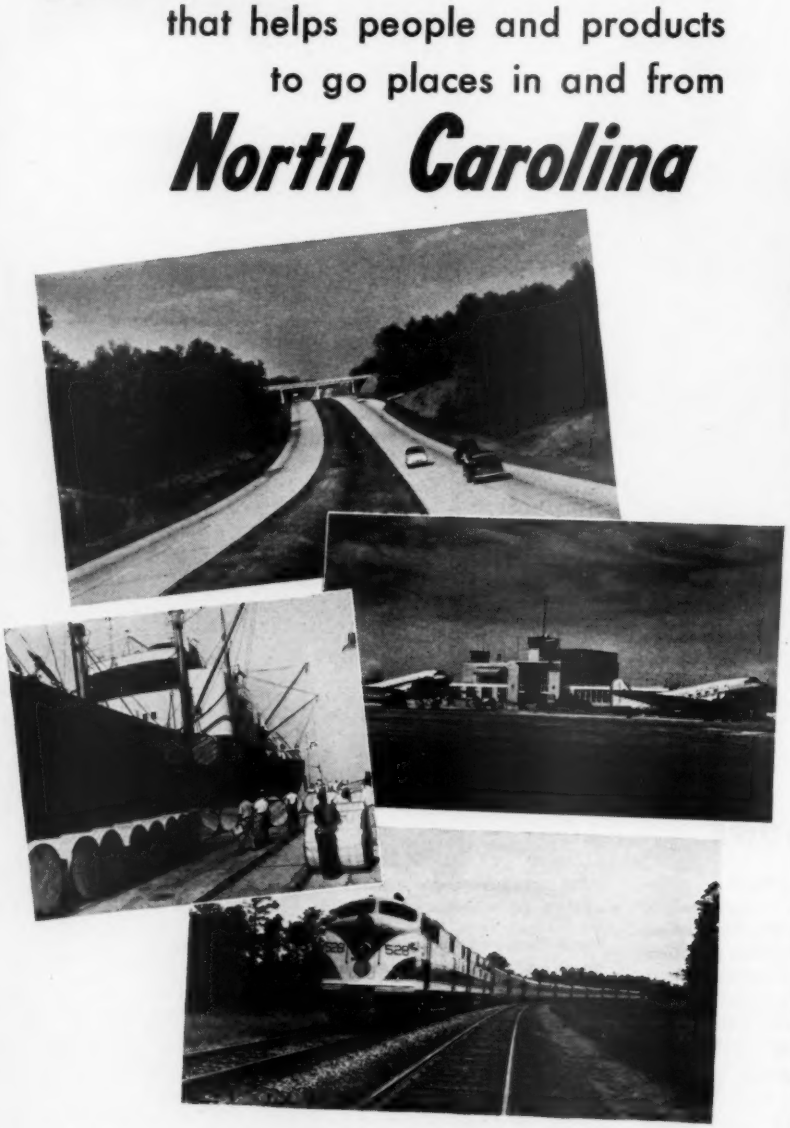
The Eagle-Picher Company • General Offices: Cincinnati (1), Ohio

A good name on any product • Widely known as an important factor in mining, smelting and processing of zinc and lead, Eagle-Picher provides many products for essential uses in the glass, ceramic, chemical and agricultural industries; in the manufacture of automotive and farm equipment and in many other fields: Slab zinc • Zinc and lead pigments and oxides • Molded and extruded rubber products Diatomaceous earth products • Cadmium • The rare metals: Gallium, Germanium • Mineral wool home and industrial insulations • Aluminum storm windows and screens.

Transportation

that helps people and products to go places in and from

North Carolina



Located within 500 miles of more than half the nation's population, North Carolina accentuates that advantage with excellent systems of highway, rail, water and air transportation, for enjoyable pleasure travel and for efficient commercial shipping. This is one of many outstanding benefits for varied industries locating and expanding in North Carolina. Information about desirable sites, some with buildings, is available promptly from Ben E. Douglas, Director, Dept. of Conservation & Development, Raleigh 4, N.C.

TRANSPORTATION is covered more fully in the 48-page industrial booklet "North Carolina Story"—free for the asking.

Friendly North Carolina
Where Industry Prospers

machine. The tipper puts two cigarette lengths end to end, with a double-length filter plug between. Then it wraps the cigarette-plug assembly together with tipping material, and cuts through the center of the whole, leaving two filter-tipped cigarettes.

• *Source: American Machine & Foundry Co., 261 Madison Ave., New York 16.*



Soundproof Lighting

In the photograph above, the engineer is checking neither the light produced by these big bulbs, nor the electricity they consume. He is trying to find out how much noise they make.

Most bulb users are not aware that their light fixtures make any sound at all. But, in searching for the source of a hum that often bothers TV viewers, engineers discovered that it came from the high-wattage lamps used as TV light sources. When microphones are moved close to the lights, the hum—amplified by metal reflectors used to focus the lamps—can become a real problem.

General Electric recently announced that its researchers have found a way to make the big bulbs almost "soundproof." Now available to both TV and photographic studios through regular channels, treated lamps cost no more.

• *Source: General Electric Co., Nela Park, Cleveland 12.*

Controlling Tension

Link Engineering Co. of Detroit thinks it has an answer to one of the tough problems plaguing industries that must wind material under tension around a central core. The new unit, called the "Lod-Cap," can be used in paper mills, for example, to keep the tension even on both edges of paper that's being rolled, thus assuring a smooth roll.

Here's how it works. The material that is being wound under tension

Squirrel cage motors, slip ring motors, synchronous motors, repulsion induction motors, capacitor motors, direct current motors . . . open, enclosed, splash-proof, fan-cooled, explosion-proof . . . horizontal or vertical . . . for all phases, voltages and frequencies . . . in single speed, multi-speed and variable speed types . . . with or without flanges or other special features . . . with 5 types of gear reduction up to 432 to 1 ratio . . . with electric brakes . . . with mechanical and electronically-controlled variable speed units . . . with fluid drives . . . and for every type of mounting . . . Master has them all and so can be completely impartial in helping you select the one best motor drive for YOU.

And all of these, the electric motors . . . the electric brakes . . . the fluid drives . . . the gear reduction units . . . the variable speed drives . . . all are designed so they can be easily combined together to give you the RIGHT horsepower, the RIGHT shaft speed, the RIGHT mounting features in one compact power drive.

That's the horsesense way to use horsepower whether you want 1/8 horsepower or 400 horsepower.

THE MASTER ELECTRIC COMPANY
DAYTON 1, OHIO

1/8 TO 400

HORSEPOWER



MASTER ELECTRIC MOTORS



this happens every day... yet Blaw-Knox requires no investment for the most effective protection . . . an automatic sprinkler system



Suppose this was your business. Young and thriving. Mortgaged? Yes, but what new business isn't these days?

Then fire strikes. Your property is not protected with an automatic sprinkler system. Raw materials, finished inventories, records—all are in ashes. You're in trouble with your customers and creditors. Production and income are non-existent. The plant must be rebuilt. It will take time and plenty of money.

You say it can't happen here? Recent statistics prove that serious fire strikes one out of every seven manufacturing firms each year. And, out of every 100 firms who lose their records alone, 43 never reopen.

The ironical part is this—Blaw-Knox requires no cash outlay to engineer and install an automatic sprinkler system, the most effective protection known. The system pays for itself in a few years through reduced insurance premiums.

Call a Blaw-Knox Fire Protection Engineer today. He will study your needs and submit a proposal without obligation.

You'll be interested in the new Blaw-Knox booklet, "Fire Can Destroy Your Business." There's no charge. Write for it.



BLAW-KNOX COMPANY
Automatic Sprinkler Department
829 Beaver Avenue, N.S./Pittsburgh 33, Pennsylvania

BLAW-KNOX

"Little Joey Sprinkler" always on the job

passes over rollers. The greater the tension in the material, the greater the push on the rollers. The "Lod-Cap" unit replaces the bearing at the end of one of the rollers; it contains a bearing and also a pneumatic device that can be set to react at a desired pressure. If the tension in the material increases, so does the pressure on the rollers, and the "Lod-Cap" sends the news to the machines that control the process.

When the pressure returns to the desired level, "Lod-Cap" notifies the controls that all is well. With the extreme sensitivity and speed of the unit, the reaction may take only a second or so.

Link says that the "Lod-Cap" can be used for other jobs where speed and accuracy must be closely controlled. In "batch-weighing," for instance—a process used in the chemical, cement, and dairy products industries—the "Lod-Cap" can be used to insure that each batch contains exactly the same weight of material as the next. The device is simple, completely enclosed, and is claimed to be free from maintenance problems. It can also be used on a printing press to control tension in paper that's fed from rolls. The price, including installation—an hour's job—is about $1,500.

• *Source: Link Engineering Co., 13851 Elmira Street, Detroit 27, Mich.*

NEW PRODUCTS BRIEFS

Two hundred wastebaskets scrubbed each hour is Fuller Brush Co.'s promise for its new rotary scrubbing machine. Fuller claims that the machine, useful wherever a large number of baskets makes cleaning a real problem, will do a better job than can be done by hand. Price: about $350.

•

Glass Christmas cards, with the color fired in, are now being offered by B. C. Moses, 3019 Prospect Ave., Houston 4. The cards are the size of a small ashtray, come complete with a special mailing carton. Three for $1.95.

•

A portable radio featuring earphones and speaker that can be used separately or together is being sold by R. I. Mendels, Inc., 41 East 42nd St., New York 17, N. Y. Called the Rimenco 415A, it operates on AC, DC, or battery, has a new design that saves battery wear. The cost: $29.95.

•

Ohdner's new adding machine, the XX-11C, has a built-in multiplication system, does not rely on complicated intermediate steps. It is said to cost from $100 to $200 less than most machines that will add, subtract, and multiply. The U.S. distributor is Facit, Inc., 500 5th Ave., New York 36.

Nobody likes a dirty wiper



...Another good reason for switching to **Scott Wipers!**

Because a clean, fresh one is always available—Scott Wipers provide a constant source of clean chip-free wiping material.

Scott Wipers are sanitary and disposable. They greatly reduce the costly scratches and digs in finished work caused by chips lodged in wiping materials. They end the laundering problem and simplify distribution and control.

Scott Industrial Wipers are two-ply and tough yet soft and absorbent. Compare them with whatever wiping material you're using now—for cost, for convenience, for performance.

The Scott representative or distributor in your area will be glad to help you set up a production line demonstration in your plant. Call him or mail this coupon today.

Scott Paper Company, Dept. BW-3, Chester, Pa.
Please send me full information on Scott Industrial Wipers.

Name_____

Position_____

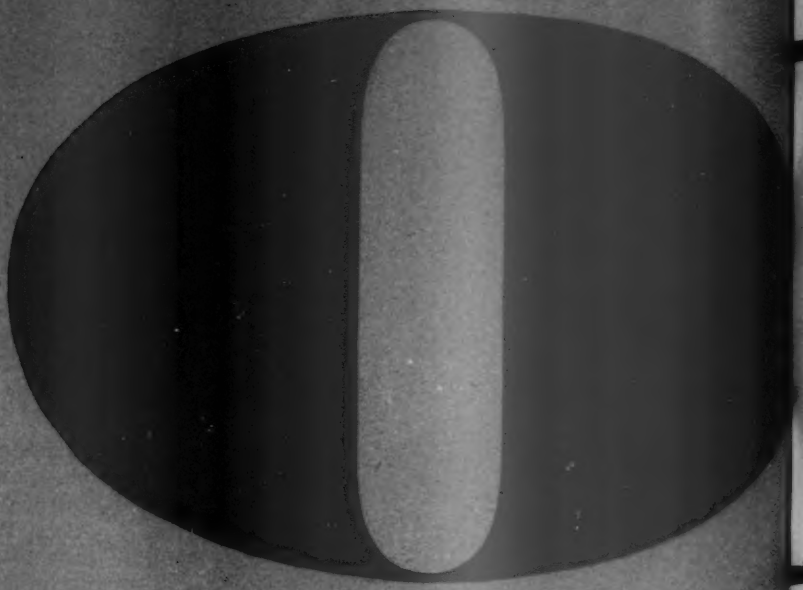
Company_____

Address_____

City_____ State_____

the world of

gets its own





EVERYTHING IMPORTANT IN OIL will be the unique province of Petroleum Week. This new communication service will keep men who matter posted on every phase of the oil industry—by giving the big picture fast, by filling in important details too . . . *through an important new technique of writing for variable-speed reading.*

oil business weekly

Oil is a fabulous business—colossal, and still growing. Its gain in volume of output in the next two decades will outstrip even the amazing growth of the last quarter century. Its technology progresses so fast that galloping obsolescence is a state of normalcy. Oil has molded the American way of life, created empires, determined the course of at least one World War.

Oil men learn fast, think fast, act fast. Theirs is a world whose tempo quickens daily. Within their own realm, these men—the men who really matter throughout the oil business—*need* a communications service totally different from that now provided either by petroleum publications or by the general business press.

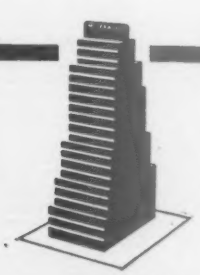
They need a cross-communication service that briefs the reader on everything important that happens to or in the oil industry—every segment of the industry, not just his specialty alone. This need goes far beyond spot news reporting, beyond analysis of trends, beyond coverage of technology, yet it includes all of these.

This information must be presented so a reader can hit all the high spots in a matter of minutes—then focus his attention and find all significant details too.

Impossible? We don't think so. The story on the next two pages tells why.

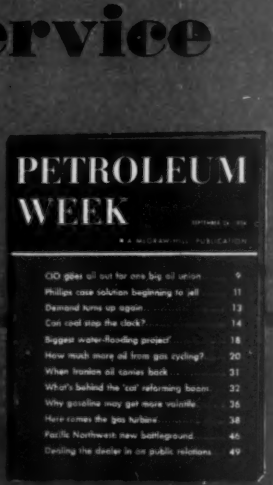
PETROLEUM WEEK

330 West 42nd Street, New York 36, N. Y.



A McGRAW-HILL PUBLICATION

because Oil men tell us they need this new information service



. . . a totally new publication, a totally new concept of writing for busy readers, enters the business press.

Petroleum Week's assignment is to meet two big needs shown in our research . . .

. . . 1—*For a truly industry-wide and industry-deep publication* covering significant developments in all segments of the oil industry—with the facts technically correct but interpreted into plain English for broad usage throughout the industry.

. . . 2—*For a publication that can be read efficiently,* at high speed, by busy men in an industry deluged by a mass of communications.

YOUR 1955 BUDGET WILL MAKE YOUR ADVERTISING DOLLAR WORK HARDER IF IT INCLUDES AN APPROPRIATION FOR PETROLEUM WEEK. Pilot issues are being printed now . . . regular publication will start in July. Be sure to capitalize on the intense interest this new magazine will arouse throughout the oil industry!

How we plan to serve Need No. 1—for a truly all-industry publication:

There are many oil publications serving specialized branches. We publish some of them ourselves. They have important roles to play. But the industry tells us that no one is providing vital information about *all* branches—production, refining, transportation, marketing—that is written in terms that are clear to oil men who are not specialists in the branches the information comes from.

Oil is an industry of intense specialties. It is segmented and technical. But it is an interdependent, integrated industry—even outside the "integrated companies." Basic developments in one segment are of great importance in other segments.

Because of its specialization, the oil industry presents great difficulties in cross-communication among the specialists—and between the specialists and the general management. Yet in this fast-moving industry such cross-communication is vital.

This is a challenge that we will meet as we work with the oil industry to design Petroleum Week. *We will report and interpret important information from any specialized branch—no matter how technical—so it can be read with understanding by (1) specialists in all branches, (2) general management men, and (3) men who are moving ahead, wherever they may now be in their companies.*

How we meet Need No. 2—for an efficient-to-read publication:

A revolution is going on in communications. It has been provoked by the growing complexity of our life—by the need for more and speedier information—and by the vast growth of communication facilities.

An important phase of this revolution is in reading. Our children are being taught to read differently—to read silently for comprehension with speed, not just orally with good enunciation and expression as we were. Thousands of businessmen are taking courses inside and outside their companies—and reading some of the many new books on the market—to learn how to keep up with the printed and typewritten material that they should read.

One of the keys to more efficient reading is a technique that might be called variable-speed reading. You do not pore over every word and every line at the same rate. You find ways to recognize the "high spots"—and you discover that they stick in your mind much better than if you had not sought them out as "high spots," but had merely read them along with the surrounding mass of details or supporting facts.

To put it another way, you scan your reading material rapidly to discover the main points, the big ideas. You "shift gears" to read the details closely only when they are particularly important to you as an enlargement on the main point. Tests show that those who develop the ability to read this way gain more than speed; they also improve their skill in catching and remembering the main points of what they read, and the useful details as well.

Now, we are learning that as publishers we can help our readers acquire and apply this skill. *Petroleum Week is the first publication we know of that is being designed from the start around the requirements of the new art of variable-speed, more efficient reading.* By the use of bold-face and other "display" type for all the high spots or main ideas—and *only* for them—we are building "signals" into our articles to call attention to the key facts. The reader then can quickly find the high spots. It may be that he is looking for nothing else; if so, he can find them with no waste time—and he can be sure he has seen them all. In many cases he'll want details; in such cases he is guided to the detail by the main-point "signals."

In effect, we are developing a way to write and print Petroleum Week for variable-speed readership—so that you can read it with maximum efficiency without waste time. We invite you to ask our representative to show you examples of this type of writing. We think you'll see quickly what we mean.

FAST YET EFFICIENT COMMUNICATIONS THROUGH VARIABLE-SPEED READING

"Cut the copy!" What advertising man hasn't been badgered by this command? "Keep it short and punchy—yet pack in all the facts!" The Petroleum Week technique provides an answer to this vital communication problem.

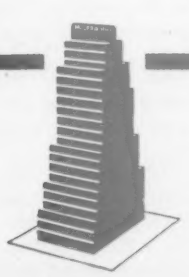
Variable-speed reading makes it possible to get a broad picture fast . . . then come back, so to speak, and fill in the details.

Writing for variable-speed reading is a technique all its own. (Try it some time.) You have to do more than just be clear, complete, concise. You flag *all the high spots*—and *only the high spots*—and present them in the sequence easiest to follow, which means knowing your subject and your reader pretty thoroughly.

An example of what we're talking about is this very spread. We'd like to know what you think of it. Even better, see how variable-speed reading works page after page in Petroleum Week. You can get a pilot issue from the McGraw-Hill office nearest you.

PETROLEUM WEEK

330 West 42nd Street, New York 36, N. Y.



A McGRAW-HILL PUBLICATION



NONFADING PIGMENTS for plastics are tested on samples at Ferro Corp. Ferro's diversification raised problems . . .

When Research Began to Sprawl

How much research should you try to do in a central laboratory and how much should you do in outlying plants of subsidiaries? That's not an academic question to the country's large diversified companies. At Ferro Corp. in Cleveland, Dr. G. H. McIntyre, vice-president and technical director, has been wrestling with the problem ever since he found out how much research was costing.

• **Getting Results**—R. A. Weaver, Ferro's chairman of the board, has been a firm believer in research since the earliest days of the company. Research has helped his company hold the lead in the highly technical business of frits and glazes, the raw materials used to put porcelain enamel finishes on bathtubs, appliances, storefronts.

The earliest research was concerned with setting standards, and this work expanded into quality control. Later, research became concerned with improvements in products and manufacturing processes. As a result, the weight of a porcelain enamel coating is now 18 to 20 grams per sq. ft., compared with the 120 grams per sq. ft. that was considered pretty good 30 years ago. The new coatings are whiter and cover better, too.

In addition, research has enabled Ferro to branch out into chemicals, powdered metals, electrical components, pigments (picture), and reinforcing fibrous glass for plastics.

• **Keeping Pace**—The company has grown both horizontally and vertically, particularly in the last decade. Research has had to keep ahead of these trends, but it has grown without formal plan.

I. Duplication

Ferro and its subsidiaries now operate plants in 10 cities in this country and in eight foreign countries. Affiliates operate in three other countries. Central research laboratories are in Cleveland, but each outlying plant also has facili-

ties. The foreign companies, particularly, could not always work with the same raw materials, and their customers did not always want the same products as their American counterparts. So their labs had to do a lot of development work on their own. Since the foreign subsidiaries were making money—carrying the earnings load in the years when Ferro's was down—no one was worried about what was considered a relatively inexpensive research operation.

• **Shocker**—No one had ever tallied up exactly what these far-flung research projects were costing. But this summer all the foreign research chiefs came to Cleveland for a coordination conference. They began comparing costs.

Some rapid calculations showed that Ferro's bill for research was running as high as $1-million a year—2½% of the company's $40-million gross volume.

All of this money was being spent on the future. The $1-million did not include routine lab work on quality control, which can be very expensive in the highly technical industries in which Ferro operates.

In doing some further checking, McIntyre found that there were at least 112 major projects under way. More than one-third duplicated each other. On the problem of color stability in titanium enamel, for example, five labs were working independently without even exchanging information. McIntyre set out with a hatchet to eliminate duplication and to get each project centered in the place where the research staff had the most experience with the problem under consideration. He's now working on the central lab to limit its work to broad, basic problems.

• **Hidden Costs**—When set down after the fact, it's difficult to see how so large a portion of the budget could have gone so long without attention. The truth of the matter is that research costs at Ferro, as in most companies, were hidden away under all sorts of categories.

It has taken months of careful digging and prodding for McIntyre to get this much information, and the full story is not yet in. Until all the facts have been assembled, it will be difficult for McIntyre to make any long-term plans and recommendations to insure he is getting his money's worth.

II. Broadening

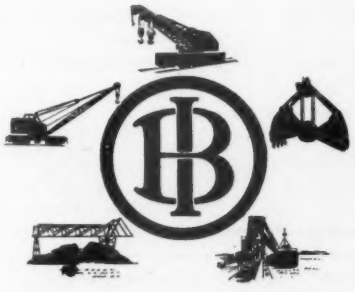
Ferro's current drive to integrate, coordinate, and generally keep a closer check on the pocketbook marks the third milestone the company's research activities have passed.

The first phase was straight one-industry growth. This was followed by an era of diversification. Now the company's research is in a mood to consolidate gains and reorganize for the future.

• **Typical**—The pattern is by no means



BROWNHOIST BUCKETS TAKE *Big Profitable Bites*



THIS BUCKET CAN pick up 30 tons of ore in a single bite. It is ruggedly designed for years of trouble-free service. These huge bites mean faster unloading of cargo ships. INDUSTRIAL BROWNHOIST equipment saves *more* labor, saves *more* time, produces *more* profit.

Whether your material handling problem calls for locomotive cranes, coal or ore bridges, unloaders, standard or special buckets, or other heavy material handling equipment, you will find BROWNHOIST always in the lead with the latest and most efficient designs.

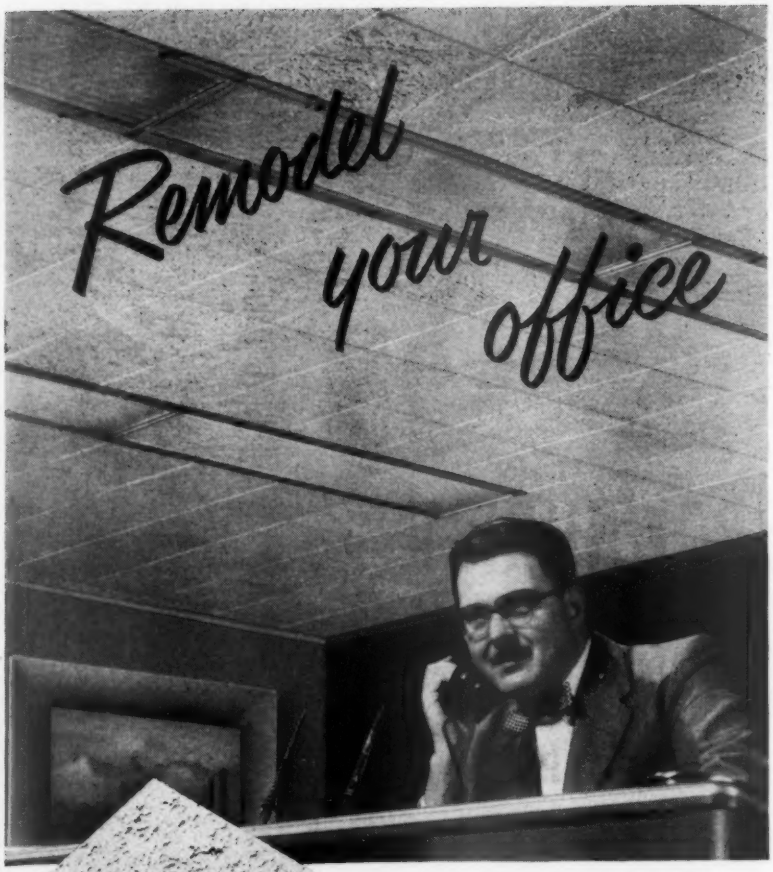
Custom-engineered jobs *to your own specifications* are a specialty with Brownhoist. Our know-how on such custom work can spell profits for you.

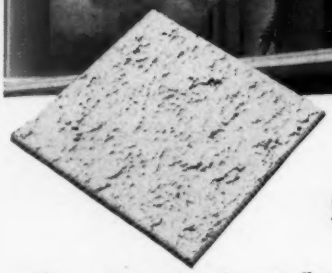
Our nearest representative will show you how to solve your problem. Or write direct to Bay City, Michigan.

BROWNHOIST GIVES A LIFT TO AMERICAN INDUSTRY

INDUSTRIAL BROWNHOIST CORPORATION,
BAY CITY, MICHIGAN Subsidiary of Penn-Texas

DISTRICT OFFICES: New York, Philadelphia, Cleveland, Chicago, Denver, Pittsburgh, San Francisco, Montreal, Q. **AGENCIES:** Detroit, Birmingham, Houston, Los Angeles.





with Gold Bond Sound Conditioning

IF you're going to make your office *look* better, make it *sound* better, too! You can do both, in one low-cost job, with a Gold Bond Travacoustic ceiling. Gives smart, good looks to any office, plus the added efficiency and comfort that sound-conditioning brings. You'll find the cost is little or no more than you'd pay for remodeling *without* the added benefit of quiet.

Travacoustic tiles have the rich appearance of imported travertine stone and, like stone, won't burn! Yet these acoustical tiles are lightweight and easy to install.

Talk over your remodeling problems with your local Gold Bond Acoustical Contractor. He'll be glad to show you the full line of Gold Bond Acoustical Products and recommend the one that best fits your job requirements and budget. Look in the Yellow Pages of your phone book under "Acoustical Contractors" or mail this coupon today! National Gypsum Company, 325 Delaware Avenue, Buffalo 2, New York.

Gold Bond—America's COMPLETE line of Sound Conditioning Materials



Acoustifibre | Econacoustic | Acoustimetal | Travacoustic | Perforated Asbestos | Thermacoustic

Get sound comfort with Gold Bond ACOUSTICAL PRODUCTS

NATIONAL GYPSUM CO., Dept. BS-114, Buffalo 2, N.Y.

Please send me without obligation:

☐ Free copy of "The Decibel"—12 page booklet picturing successful sound-conditioning jobs. ☐ Name of the Gold Bond Acoustical Contractor nearest me.

NAME.....

ADDRESS.....

CITY..... COUNTY..... STATE.....

unique with Ferro. In fact, it's practically a capsule history of all industrial research in this country.

In 1919, when Ferro was organized, research as we think of it today was unknown in the porcelain enamel industry. Each company had a technical man who knew a number of handed-down, father-to-son formulas.

• **Getting Specific**—Research on a formal basis started at Ferro—and perhaps in the industry—in 1924 when Ferro Enameling Co. established a fellowship at Western Reserve University to find out what caused bubbles to appear occasionally in porcelain enamel. The answer still isn't known completely, though a great deal has been learned about ceramics in the course of studying the original problem.

The second man to win the fellowship was Dr. McIntyre in 1925. In 1927 he moved part-time to the company laboratory and, with two associates, began to set up standards for raw materials control and standards of operation. In 1927, they also started working on a continuous furnace for smelting frit. In a sense they're still working on it although the whole plant is now converted to the continuous operation.

In 1930 the research group, which had grown steadily, set to work on a project to find a more opaque enamel for sheet steel. Its work on this general project led to antimony enamels in the 1930s, zirconium enamels in the 1940s, and to titanium in 1945.

• **Wider Field**—During the 1930s, the company grew rapidly, both in this country and abroad. Development labs began to spring up to handle specific problems in the field. In 1933, Ferro got into pottery and allied fields by acquiring Allied Engineering, and in 1939 it started to manufacture oxides (color) for porcelain enameling and glaze stains.

Diversification took hold at Ferro with the approach of World War II. Top management felt that frit and glaze were pretty certain to be war casualties. The company would have to diversify to stay in business.

• **Into Chemicals**—C. D. Clawson, at that time sales director and now president of the company, became interested in chemicals. McIntyre's central technical group had considerable chemical know-how with its work on ceramics and pigments, so chemicals seemed a logical move. In 1941, Ferro Chemical Corp. was organized.

At the start of the war, however, the company still was not physically equipped to go after the major chemical contracts that were being let to the du Ponts, Monsantos, and Eastmans of the industry.

Clawson went to Washington to seek the small—and often dirty—jobs that the giants of the chemical industry



HOT ASPHALT pours into new Morania No. 160 barge. Double-hull construction and double heating coils are designed to maintain cargo at workable temperatures.

Want to ship a 40-mile highway somewhere?

You could pave a two-lane highway from Baltimore to Washington with the hot asphalt this new steel barge can haul —and pave another three miles besides.

Designed and built by Barium's Wiley Manufacturing Co., Port Deposit, Md., for Morania Oil Tanker Corp., the 240-ft. Morania No. 160 is now running from Baltimore, Md., or Barber, N.J. to points on the N.Y. State Barge Canal and ports on the Atlantic coast, principally moving asphalt of the American Bitumuls & Asphalt Co. It has made a big splash in maritime circles because (1) it holds as much asphalt as 67 railroad tank cars and (2) it's the only asphalt barge designed to operate in both inland and coastwise service.

What's more, on her first trip, the Morania No. 160 hung up a new record for discharging — 16,000 barrels in seven hours!

However, full utilization of low-cost water transport also calls for strategically located terminals specially designed for heated bulk storage of asphalt. Here, too, Barium has the answer — Wiley can design, engineer, fabricate and erect new-design terminals under a turn-key contract.

You can also see in this barge more evidence of Barium's "integrated operations". Wiley builds it, but Barium's Central Iron & Steel and Phoenix Iron & Steel supply plate and structural steel respectively.

A long list of firms have learned to expect this type of joint action from Barium's 16-company team. We're saving a copy of "The Barium Story" for you, if you'd like to know more. BARIUM STEEL CORPORATION, 25 Broad St., New York City 4.

4.20

16 INTEGRATED COMPANIES
BARIUM
STEEL CORPORATION
WORKING IN STEEL, ALUMINUM, MAGNESIUM, FIBERGLASS

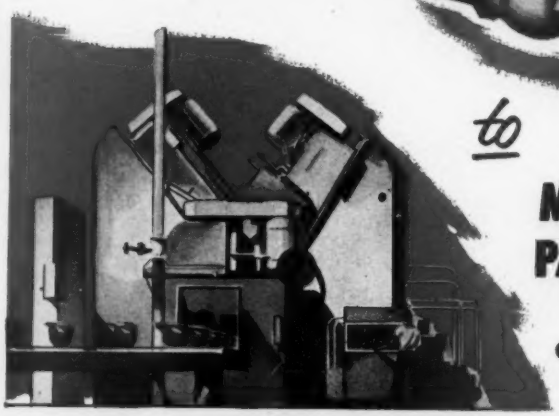
BAYONNE BOLT CORP. • CENTRAL IRON AND STEEL COMPANY • CHESTER BLAST FURNACE • CLYDE IRON WORKS, INC. CUYAHOGA SPRING COMPANY • EAST COAST AERONAUTICS, INC. • ERIE BOLT AND NUT COMPANY • GEOMETRIC STAMPING CO. GLOBE FORGE, INCORPORATED • INDUSTRIAL FORGE & STEEL, INC. • JACOBS AIRCRAFT ENGINE CO. • KERMATH MANUFACTURING CO. • KERMATH LIMITED (CANADA) • PHOENIX BRIDGE CO. • PHOENIX IRON & STEEL CO. • WILEY MANUFACTURING CO.

From

ASBESTOS
die-formed
PACKING RINGS
for small units



to



MOULDED PACKINGS
for giant automations

There is a Johns-Manville Packing for every sealing need



Working closely with leading industries, Johns-Manville has developed a broad line of packings and other sealing devices. They are furnished for small equipment components and for large automatic machines. They can be produced in virtually any volume required. These materials are precision-made to seal tighter and last longer under the service conditions for which they are designed.

For example, Johns-Manville has pioneered in developing moulded packings with greater compactness and higher efficiency . . . and in developing asbestos and synthetic rubber compositions to withstand severe service. These quality packings last longer, reduce wear on costly equipment, result in fewer shutdowns for maintenance.

Four modern plants—Manville, New Jersey, specializing in moulded, fabric and sheet packings . . . New Brunswick, New Jersey, metal-asbestos and metallic gaskets . . . Waukegan, Illinois and Watson, California, sheet packing and gaskets.

Over four hundred J-M packing distributors assure you of prompt service when you need maintenance packings.

For more information about J-M Packings and Gaskets, write Johns-Manville, Box 60, New York 16, N. Y.

Pioneer in packings for over 80 years

JOHNS-MANVILLE JM PRODUCTS **Johns-Manville**
PACKINGS AND GASKETS

broke off as subcontracts. One of these was a development contract from Office of Scientific Research & Development on napalm, the flaming jelly bombs that were resurrected with such great success during Korea. Working on a subcontract from Eastman Kodak, Ferro produced about 30% of all the napalm used during World War II.

After napalm, Ferro research set to work on other war chemicals. Special plants were built to produce chemical smoke mixes, incendiary bomb starters, and even some raw materials for gas warfare. By the end of the war, research had earned Ferro a firm foothold in the fast-growing chemical industry.

III. Postwar Trend

For a while after the end of the war, research went back to frits. The day after VJ day, work started on electric smelters, and considerable work was also done on a low-fusing enamel for aluminum.

Ceramic-glazed cement block was also picked up as a research project after the war. There had been some experiments with this in the 1930s. But the blocks had to be heated so much to take the enamel that they frequently would crumble. Lower-temperature frits made it possible to work on these cement blocks again.

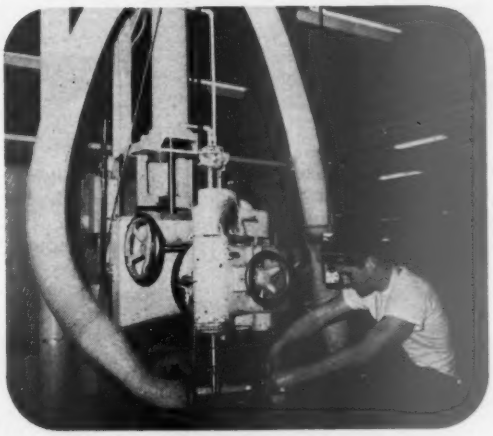
The most recent ceramic project is a lightweight aggregate for use in cement blocks, formed plastics, rubber. Armour Research Institute developed a laboratory method of making tiny glass bubbles under a contract with Kanamite Corp., Chicago brickmaker, which was looking for a lightweight aggregate. Armour ran into difficulties building a pilot furnace for commercial production, and last January, Kanamite interested Ferro in the project. A pilot furnace has now been built, and Ferro has bought a substantial, though minority, interest in Kanamite Co.

• **New Branches**—While the central laboratory has been concerned in the postwar years with these ceramics projects, the company has been diversifying rapidly. In 1949 it got into the manufacture of electrical components (heating units, switches, controls). In 1952, it turned to fibrous glass products for plastics reinforcement; it also acquired a powdered metals company and a substantial interest in Horizons Titanium Corp. and its new ore refining process. In 1953, it came out with FTE (fritted trace elements), a fertilizer additive for the agricultural market.

About the hottest item in the labs these days is a series of inorganic pigments for plastics. The plastics industry is now beginning to use nonfading colors similar to the ones Ferro has been making for years for the ceramics industry.

pioneering developments keep **DUSTUBE®** *first in dust control*

BOEING saves $5400 annually





with WHEELABRATOR dustube® dust control system

Saves Valuable Warm Air, Improves Working Conditions

Heated air formerly lost when it was exhausted along with sawdust and fine metal particles from the wood and pattern shop at Boeing Aircraft Co., now is used to help heat the plant . . . and saves $5,400 a year in steam heat.

Since switching from cyclone collectors to Wheelabrator Dustube cloth-tube type collectors, Boeing is able to remove sawdust and fine metal particles so thoroughly, the air can be returned to the working area of the plant. Savings in cold weather approximate 2,400 pounds of steam an hour—enough to heat 24 average homes.

Uniform recoveries approaching 100% are commonplace with Wheelabrator Dustube collectors. In many instances, this recovery is important in terms of material that can be reused.

But whether it is clean air or recovery of valuable material that is most important to you, the results depend on the efficiency of the dust collector.

Wheelabrator Dustube has proved in plant after plant and industry after industry that it has top efficiency. Yet, its simple design makes it less costly to install, operate and maintain.

Investigate Wheelabrator Dustube Collectors today to find the thorough, economical answer to your dust collection problems.

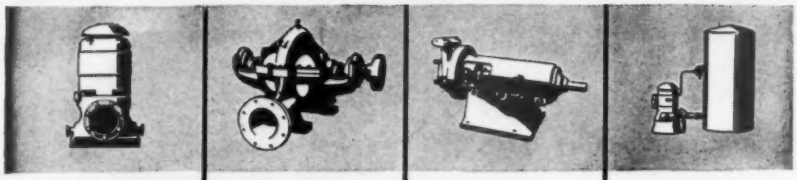


Write for your copy of Catalog 372 today.

American
WHEELABRATOR & EQUIPMENT CORP.
461 S. Byrkit St., Mishawaka Ind.

dustube®
COLLECTORS

YOUR BUSINESS DEPENDS ON PUMPS

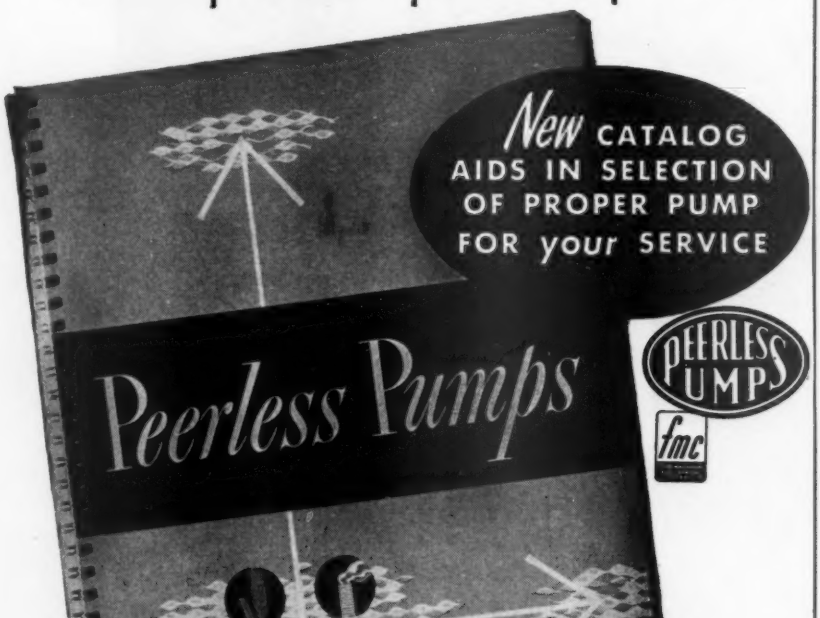


VERTICAL DEEP WELL TURBINE PUMPS FOR WATER SUPPLY

HORIZONTAL PUMPS FOR LIQUID TRANSFER AND CIRCULATION

PROCESS PUMPS FOR CHEMICALS AND HYDROCARBONS

WATER SYSTEMS AND PUMPS FOR FARM AND HOME



Free — 104 pages of informative engineering and application data on horizontal and vertical pumps in sizes from ¼ to 2500 hp.

Centrifugal pumps of all types and sizes in both horizontal and vertical designs are fully described in this comprehensive catalog. Nearly every liquid moving problem, from water booster service to liquid foam fire fighting pumps, can be solved with a pump from the complete Peerless line. Profusely illustrated, the new Peerless catalog, printed in 4 colors, is complete with product descriptions, pump pictures, cross sections, drawings and data in both diagram and chart form plus page after page of useful pump engineering data never before published in one convenient source. To obtain your FREE copy of this new 104 page catalog simply fill in the coupon below or use your letterhead and request Peerless Bulletin No. B-127

PEERLESS PUMP DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION

Plants: Indianapolis, Indiana; Los Angeles, California
Offices: New York; Indianapolis; Chicago; St Louis; Atlanta; Dallas, Plainview and Lubbock, Texas; Albuquerque; Phoenix; Fresno; Los Angeles.

MAIL COUPON FOR YOUR FREE CATALOG

PEERLESS PUMP DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION
301 West Ave. 26, Los Angeles 31, Calif.
Please send me a copy of your General Catalog No. B-127.

NAME_____

COMPANY_____

STREET_____

CITY_____ STATE_____

"Quantum Jump"

Fairchild takes a flier on oft-scorned theory that might increase the yield of fuels 8,000 times.

The inventor's idea has been kicking around Washington for weeks. He calls it the "quantum jump" process, says that it can increase—by some 8,000 times—the power that can be extracted from coal, petroleum, and other carbonaceous fuels.

Nuclear scientists call it a crackpot idea. But some technical brass at the Pentagon think that it has a reasonable chance. Last week, a major aircraft manufacturer said that it would put down a bit of cash to see whether the gleam was gold or just a brick.

The manufacturer, Fairchild Engine & Airplane Corp., says that it has retained the inventor—Col. Harry Hardsog, former research and development officer at the Defense Dept.—on a consulting basis for the rest of the year. The company has agreed to set up a lab for him at Northboro, Mass.

Fairchild officials seem almost embarrassed to talk about it, because Hardsog's theory has been ridiculed so thoroughly since last spring, when he set out on his search for a sponsor. The company stresses the fact that he will also work on other projects during his stay at Fairchild.

Hardsog's theory involves the excitation of the carbon atom. This happens, he says, when the energy balance within the atom is upset. An atom of carbon is excited. It breaks into an atom of hydrogen, an atom of boron, and 16-million electron volts of energy.

From 1 lb. of coal, Hardsog says he would get 78.3-million Btu. (Conventional combustion releases only 10,200 Btu.) He sees its immediate application in such heavy fuel users as locomotives, ships, guided missiles.

This excitement within the carbon atom is what Hardsog calls the "quantum jump." He says that it's a type of fission that hasn't been tried before. Scoffing scientists say that it hasn't been tried because it is physically impossible to fission carbon.

Why is Fairchild interested? One observer in the nuclear energy field says, "Maybe it's because they don't have any nuclear scientists." Actually, that's not so. For several years after World War II, Fairchild had a contract with the government for research into the potentials of atomic energy for aircraft power. Over the next few weeks, some of the same men who worked on that government project will try to pull Hardsog's idea apart.

IF MINERAL RESOURCES are important to your PLANT LOCATION,

investigate



Will your new plant need brines, salts, sands, limestone, gypsum or dolomites? These and many other minerals are found plentifully in and near THE CENTER OF INDUSTRIAL AMERICA!

Here you are "next door" to America's major markets and largest suppliers, yet you're away from traffic bottlenecks and congestion.

Ample mineral resources represent only one of the many plant location advantages of THE CENTER OF INDUSTRIAL AMERICA. Here you will find the ideal combination of plant location factors you seek. For detailed information, send the coupon today!

Ohio *Edison* Company

AKRON 8, OHIO



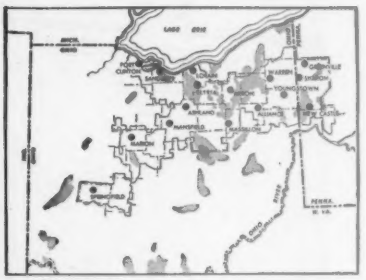
Mr. Walter T. Ackley, General Supervisor of Area Development
Ohio Edison Company, Akron 8, Ohio
Please send FREE area map.

Name _____

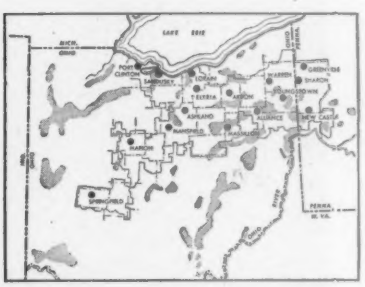
Company _____

Address _____

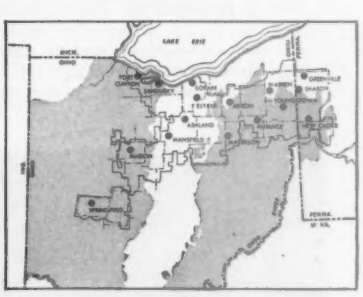
City _____ Zone ____ State _____ B-7



SILICA, MOLDING SAND and BUILDING SANDS are found throughout the area in commercial quantities. Fine, clean sands for making casting molds are found naturally bonded with clay and iron oxides.



CERAMIC CLAYS are abundant in the area. Here is a natural location for the manufacture of finest quality stone and china ware, refractory ware, ceramic tile, sewer pipe, brick and clay products.



LIMESTONE AND DOLOMITES for concrete, furnace flux, glass and ceramics are plentiful in and near this region. Natural sandstone for beautiful buildings is quarried in much of the area.

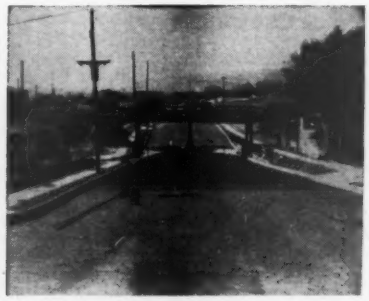
©1954, O. E. CO.



1 ***Mr. A. B. Drastrup*** (right), president, A. M. Byers Company, and Mr. B. M. Byers, vice president, review blueprints for a huge, new underground parking garage in Pittsburgh's Mellon Square. Byers' wrought iron pipe will be used for the snow-melting system. Most snow-melting systems use wrought iron pipe because it resists corrosion, withstands vibration stresses and has long life. But without an antifreeze material like ethylene glycol, snow-melting systems would not be practical. Ethylene glycol — a versatile, non-volatile Wyandotte chemical — prevents circulating water from freezing. When properly formulated, it also protects pipes from corrosion.



2 ***Boston Aerial Highway,*** largest snow-melting system anywhere, uses over 200 tons of Byers wrought iron pipe. Steam heats the pipe's water-glycol solution. Wyandotte glycols are also used in car antifreeze, synthetic resins and fibers.



3 ***Byers' installations*** include graded intersections. Wyandotte's line of basic chemicals includes: chlorine, caustic soda, soda ash, bicarb. Wyandotte's new surfactants, the Pluronics®, are improving water conditioners, detergents and metal cleaners.



4 ***Large snow-melting*** systems, like the John Hancock Mutual Life Ins. Co. installation, allow longer runs of wrought iron pipe — save costs per foot. Buying in carload lots from Wyandotte's wide range of chemicals effects big savings, too!

New snow-melting systems let you throw away your shovel!

Melting snow instead of shoveling it has now proved practical in a wide variety of applications. Essentially, snow-melting systems use wrought iron pipe embedded beneath the surface to be cleared . . . being outdoors and running intermittently, they depend on ethylene glycol — an organic chemical manufactured by Wyandotte — for antifreeze protection.

Playing a leading role in the rapid development of snow-melting systems is the A. M. Byers Company, Pittsburgh, Pa. — the oldest and largest producer of wrought iron in the United States. A. B. Drastrup, Byers' president, says, "Wrought iron snow-melting systems have given wonderful results in walks, drives, roads, ramps, loading docks . . . even in theatre and hotel marquees. Without products like Wyandotte's ethylene glycol these systems would not be practical."

Supplying basic chemicals to industry has been Wyandotte's business for over 64 years. Chemical users look to Wyandotte for chemicals of uniform quality and purity . . . for service that's dependable and prompt. If you use organic or inorganic chemicals, contact Wyandotte . . . send us your requirements direct, or call your local Wyandotte representative. *Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.*

*REG. U.S. PAT. OFF.

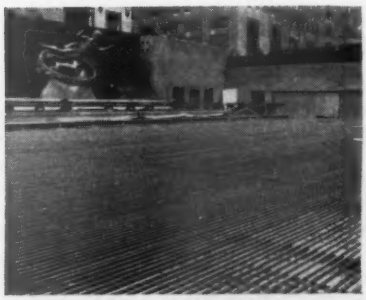
Wyandotte CHEMICALS

REG. U. S. PAT. OFF.

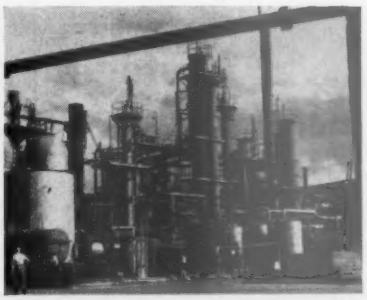
Organics, Inorganics — World's largest manufacturer of specialized cleaning products for business and industry



5 ***Byers' snow-melting system*** keeps doors of American Airlines hangars free of snow and ice. Wyandotte supplies aircraft plants with basic chemicals, metal and emulsion cleaners, paint strippers, deseal-ants and ZORBALL—the skidproof absorbent.



6 ***Within wrought iron pipes,*** Glycols are used in the freezing of ice (Rockefeller Center Skating Rink, above). In practically everything — your clothes, food, house, car — Wyandotte chemicals help make your life healthier, cleaner, safer.



7 ***Wyandotte's glycol plant*** (above) works night and day to bring you antifreeze and industrial grades of glycol. Wyandotte also makes ethylene dichloride and diethylene glycol. Perhaps we can serve you . . . write us, giving details of your problem.



"Oh, no–not again!"

"Well—!!XX?%$#! I stick around half the night to get these estimates finished and mailed...and now look! Just a few torn stamps. Why does it always happen to me?"

● It needn't! Now, even the smallest office can do away with licking, sticking and guarding stamps...with postage *always* available! How? With the DM, little desk model postage meter.

● It *prints* postage, any amount needed for any kind of mail, right on the envelope...with your own small ad, if you like...and a dated postmark, so the mail goes faster through the postoffice. Supplies parcel postage on special tape. Has a moistener for sealing envelopes.

● The DM can be set for as much postage as you need to buy...protects it from loss, or spoilage, and automatically accounts for it.

● Other models, hand and electric, for larger firms. Ask the nearest PB office for a demonstration. Or send the coupon for free illustrated booklet.

FREE: *Handy chart of Postal Rates with parcel post map and zone finder*



PITNEY-BOWES

Postage Meter

Offices in 93 cities in U.S. and Canada



PITNEY-BOWES, INC.
1424 PACIFIC ST., STAMFORD, CONN.
Please send free ☐ DM booklet, ☐ chart to:

*Name*_____

*Address*_____



The Sniffles Yield an Inch

Nobel Prize-winning technique permits study of viruses. Industry is asked to finance the new attack on the common cold.

Sniffles and sneezes—which no one takes very seriously—cost U.S. industry each year five times the production lost in all the headline-rating labor stoppages. To cut this loss an all-out industrial campaign, spearheaded by the Common Cold Foundation, is just getting under way against filterable viruses, now generally accepted as the cause.

Man has been looking for the cause and cure of the common cold for about 2,000 years. In the last 40 years or so, the work has been conducted on an organized scientific basis, and a lot of the oldwives' tales have been discarded. Despite the warnings of generations of grandmothers, you don't catch cold because you forget your rubbers. A chill may make you more susceptible to a cold, but it's not the cause. Viruses are the core of the problem, and there are hundreds of them to be tested.

• **Barrier**—In all previous research on colds, there has been an enormous roadblock: Only two animals are susceptible to colds—man and the Anthropoid ape. Where other medical research can use mice, guinea pigs, or rabbits, cold researchers have to experiment with chimpanzees who bite and men who worry. The work has been prohibitively expensive. To begin with, the cold is unspectacular. It is neither a crippler nor a killer like polio, plague, or cancer. That "mildness" makes it difficult to raise money to fight it, even though it hits everybody on the average of twice a year for a total disabled time of 2½ days.

Just lately, the seemingly impenetrable wall that surrounded the cold has been cracked. The medical profession has found a research tool that may lead to a solution. This tool is a tissue-culture technique developed by Dr. John F. Enders of Harvard University's Medical School and his collaborators, Dr. Thomas H. Weller of Harvard's School of Public Health and Dr. Frederick Robbins of Western Reserve Medical School. For their accomplishments in the field, all three shared this year's Nobel Prize in Medicine and Physiology.

The Enders-Weller-Robbins tissue-culture technique has been used primarily in polio research, but it is now being put to work on the cold. It enables cold researchers to grow viruses in a test tube on various bits of human and monkey tissue. Under appropriate conditions, the viruses multiply on the tissue.

• **Unique**—The Common Cold Foundation, which is raising the $500,000 needed for next year's research, is unusual in both its organization and its fund-raising approach. The board,

headed by O. Parker McComas, President of Philip Morris & Co., Ltd., Inc., reads like the board of a national bank. Similarly, the scientific advisory committee, headed by Dr. Yale Kneeland, Jr., of Columbia University, consists of nationally known respiratory research scientists. The foundation's first fund-raising meeting, held last week in New York's exclusive Union League Club, certainly helped to underscore the blue-chip aspect of the operation.

• **Underwriter**—The foundation plans no public campaign. Such campaigns can be very expensive. The board feels that the cold's industrial implications (150-million work days lost last year) are enough to make industry foot the bill.

The foundation will therefore concentrate most of its efforts on companies with a large labor force who have much to gain by speedy discovery of the cause and cure of the common cold.

There's some indication, too, that Chicago and the North Central States will get considerable attention. Chicago ranks highest among U.S. cities in the rate of common colds. No place is completely free of the problem, however. Reports from the U.S. Public Health Service show that there are more than 500-million colds in the U.S. each year.

RESEARCH BRIEFS

Man-made fibers (rayon, acetate, nylon, Orlon, and Dacron) will be tested under a wide variety of temperature and humidity conditions in a two-year project just awarded to School of Textiles, North Carolina State College by du Pont. The study will give technologists engineering data for developing fabrics with specific end uses.

•

A trip to the moon may be closer than you think. Stanford Research Institute reports that its studies on "combustion instability" may let engineers spot and correct rocket instability in the design stage. Vibration, which can throw a rocket off course or even cause it to explode, has been one of the big stumbling blocks in designing big, long-range rockets.

•

New projects: Standard Oil Development Co. is starting construction on a new lab to study possible application of atomic energy radiation to actual manufacturing of petroleum products. . . . Arabian American Oil Co. is footing the bill for a five-year, $500,000 research program at Harvard's School of Public Health. The aim is to discover a vaccine for trachoma, a contagious eye disease widespread in the Mediterranean area.



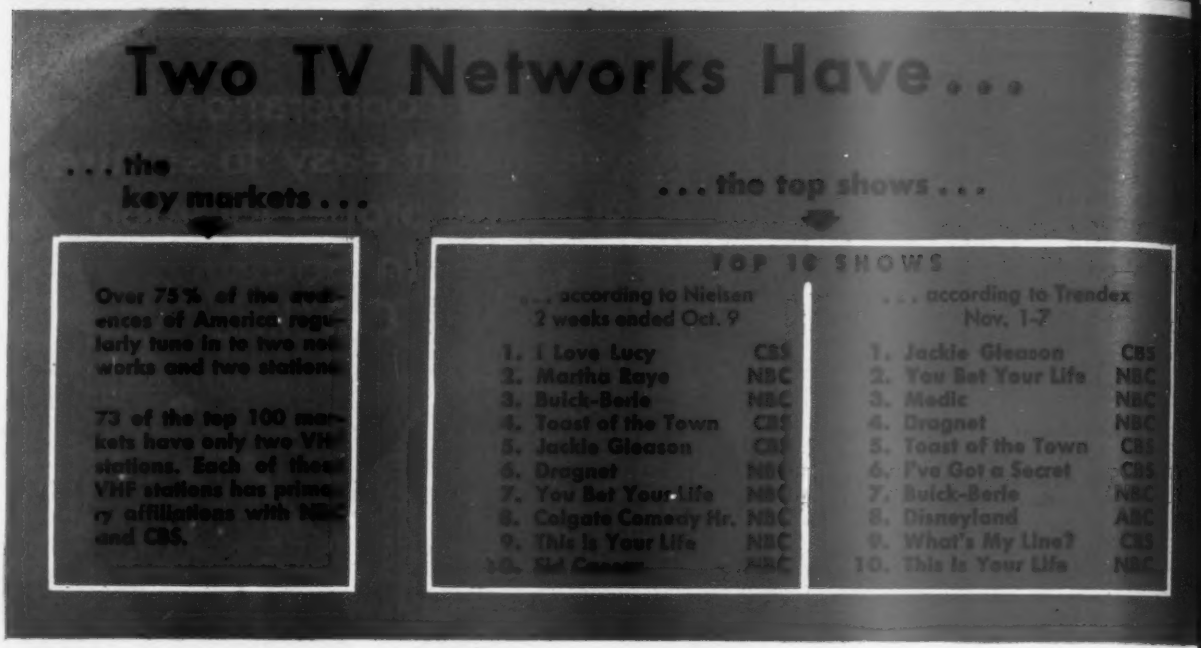
The South Carolina State Development Board acts in your best interest to help you acquire the best site for your new plant. Community leaders will cooperate in every way possible to assist new industry in locating favorably. The Board makes these contacts for you and paves the way for advantageous negotiations.

Providing assistance to new industry is a primary job of the State Development Board. In addition to factual information, the Board offers other personal services to help prospective plants establish themselves. All replies in strict confidence, of course.

SITE ANALYSIS
SITE INSPECTION
SITE ACQUISITION
CONTINUING ASSISTANCE

Write, wire or telephone LD 94 today.
Director
State Development Board, Dept. BW-11
Columbia, South Carolina

South Carolina
STATE DEVELOPMENT BOARD



What's Left for the Smaller Ne

Whenever a television executive turned his head last week, a new rumor whizzed by his ear. The rumor had many variations, but the basic theme was always the same: TV was losing its fourth network. Specifically Du Mont Television Network of Allen B. Du Mont Laboratories, Inc., was supposed to be selling out, probably to American Broadcasting Co.

In the midst of the furor, the principals sat in a cone of silence and unavailability. When they did speak, they were as ambiguous as the ancient oracles.

An ABC executive, asked about the status of a Du Mont-ABC deal, replied, "You shouldn't ask."

A spokesman of American Broadcasting-Paramount Theatres, Inc., parent company of ABC, said, "the discussions have been terminated."

Late in the week, Ted Bergmann, managing director of Du Mont TV, put out a "clarifying" statement: "We are not now nor have we any intention of entering into negotiations with any other organization or individual which contemplates the disposition or the abandonment of the Du Mont Television Network." Bergmann added that Du Mont had studies in hand that offered promise of more economical network service.

• **Odds**—Despite this apparently forthright disclaimer, the best money was on this horse: Du Mont wants out as a network. A top executive of another network believed Du Mont planted the rumors to lure a buyer.

However it was planted, the rumor, on the evidence, had some root. At least one network official says Du Mont made him an offer, which he turned down because the asking price was "fantastic." Plainly, some kind of discussion has been under way in the past few weeks. Just as plainly, Du Mont has serious qualms about the prospects of a fourth network in this competitive, costly field. Bergmann himself stated, "It is true that certain exploratory conversations have been held in the process of the evaluation of the long-term future of four competing networks in television."

• **Figures Talk**—The tables above give statistical reasons enough for Du Mont's concern. Du Mont lacks three prerequisites for successful operation: advertising revenues, high-scoring shows, and clearance—or room on the air to get its shows to the receiving sets. On all three scores, the two giants—Columbia Broadcasting System and National Broadcasting Co.—have everything their way.

The revenue figures, admittedly, must be taken with a cup of salt. But they stand as a useful index, and Du Mont's position as a bad fourth is apparent.

ABC's position doesn't look too strong, either. But ABC has two assets that Du Mont doesn't have: the biggest percentage gain in network billings of any network for the first nine months of 1954 against the same period last year, and one brand new show, Disneyland, on the top 10 Trendex rating.

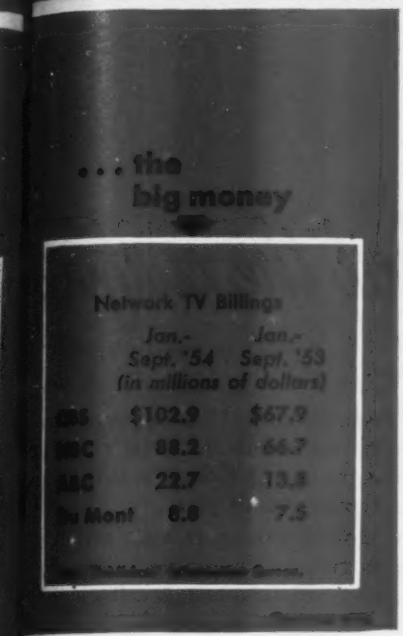
Whatever the eventual outcome of the recent discussions, a look at the background throws a good deal of light on the whole current TV picture.

I. The "Deal"

The dopesters, working overtime in recent days, have persistently underlined Du Mont's plight by a query: Does Du Mont have anything to sell? That, of course, is excluding its manufacturing operations, where Du Mont has always been strong—and which would hardly be part of any deal.

The company does own and operate three stations: WABD in New York, WTTG in Washington, D.C., and WDTV in Pittsburgh. It has some studios. It controls some good programs, notably the Admiral-sponsored Bishop Fulton Sheen program, and some sport shows. It has a bunch of network affiliations.

• **Split Deal**—Most of the gossip has any projected sale as a split deal, with



Networks?

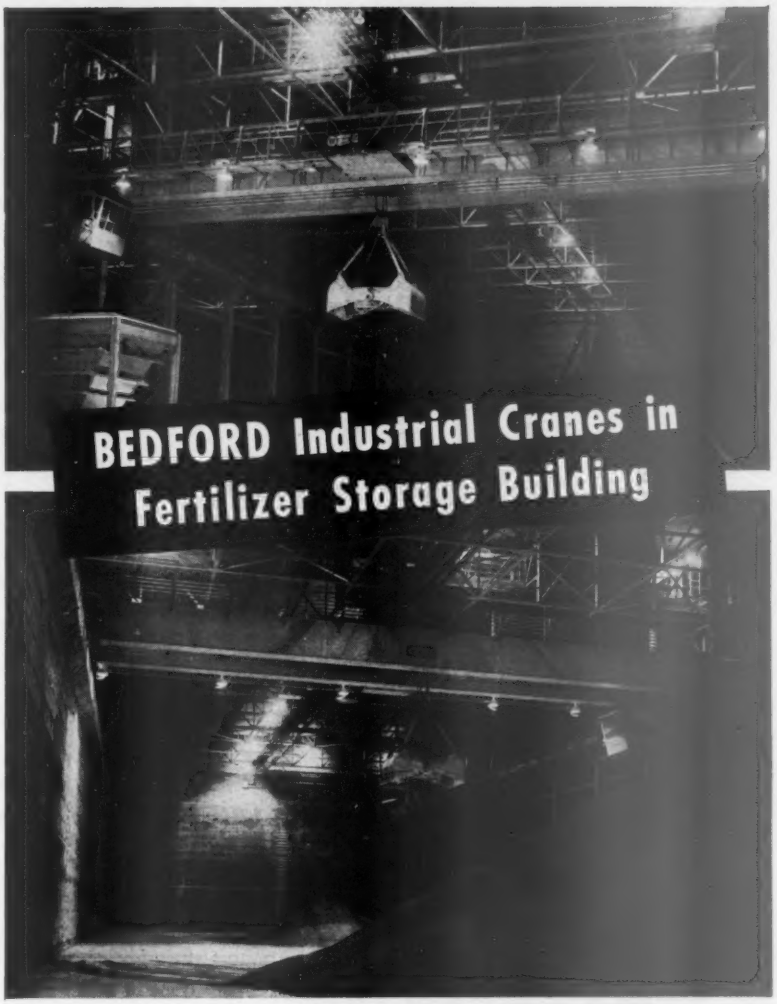
no large sums of money involved in any of them. Du Mont might sell the network to one customer, peel off a station or two to one or two others. Some people believe Du Mont would like to keep ownership of the stations, perhaps lease its facilities.

The industry is at odds on how much the stations themselves are worth; normally, the owned stations bring in the lion's share of a network's revenue. One network official says even the stations are losing money. Others believe that at least the Pittsburgh station is a good earner.

But even the Pittsburgh station has passed a peak. Until now, WDTV has had a favored position. It is the only VHF (very high frequency) station in the area. The other networks funnel their VHF programs through it. But Pittsburgh is scheduled to get more stations. When that day comes, WDTV will be out a good chunk of business.

CBS, mentioned as a possible buyer of the Pittsburgh station, flatly denies any interest. So does Westinghouse Broadcasting Co.

A question mark hovers over the Washington station, too. ABC already has an affiliated station there. The likeliest bet is that ABC might switch its affiliation to WTTG in any Du Mont deal, rather than buy the station outright. In New York, all four major net-



Two 10-ton Bedford Industrial type Bucket Cranes in the storage room at Nitrogen Division of Allied Chemical & Dye Corporation's South Point, Ohio, plant.

Throughout industry important companies are installing Bedford industrial type cranes to cut material handling costs on the *big* jobs.

Typical is the installation illustrated where two 10-ton Bedford Cranes on parallel runways service a 50,000 ton storage area.

Available in sizes from 5 tons to 350 tons for all kinds of service . . . each Bedford Crane is individually engineered for its specific job. Modern equipment plus advanced methods result in custom quality at production prices.

Why not consult a Bedford engineer on your next crane problem? Learn how you too can profit from Bedford's 52 years of specialized crane application experience.

(Write for complete catalog describing Bedford Cranes in detail.)



New York Office: 280 Madison Avenue
New York 16, N. Y., Phone MUrray Hill 5-0233

Pittsburgh Office: Oliver Building, Room 1241
Phone ATlantic 1-0136

ENGINEERED CRANES BEDFORD

BEDFORD FOUNDRY & MACHINE COMPANY, INC. • BEDFORD, INDIANA

COPPER ...we've only scratched the surface



The old-time miner got his ore by the shovelful. Today, at the controls of huge power shovels, he can scoop as much as 17 tons at once.

THE FULL EXTENT OF COPPER RESERVES in the U. S. has never been established. Huge open pit mining operations are literally moving mountains of copper ore, and yet the copper industry's capacity to serve America's manufacturers increases year by year.

That is because constantly improving techniques, such as power shovels that scoop up to 17 tons in a bucketful, turn immense bodies of what was once considered just rock into multi-million dollar mining projects. Today, copper is being extracted profitably from ores with an average metal content of only 0.85%. As the grade of ore which can be mined commercially becomes lower, copper reserves are multiplied. These factors, together with further exploration of present sites, and new discoveries, are progressively extending our copper supplies.

Current projects in the United States alone will provide a net increase in productive capacity of ¼ million tons of copper annually by 1956. This is a gain of more than 25% over 1953 figures. Similarly, substantial increases are being reported from foreign sources, thus satisfying the growing world demand and making more copper available for U. S. import. In addition to this primary copper, steady increases in scrap receipts are further adding to the total copper supply.

In the search for both quality and economy, American industry has found that it pays to use copper and brass. Ease of fabrication, high conductivity of heat and electricity, corrosion resistance, and a host of other desirable qualities simplify production problems and produce a handsome, durable product. This unique combination of properties has resulted in a steady increase in copper consumption. Except for temporary disturbances, to which any industry is subject, the output of copper has always been ample to satisfy these demands.

Every day brings new developments made possible by copper and copper alloys. From the heart of an atom smasher and the huge generators and heat exchangers of nuclear power stations to the multitude of electrical and electronic gadgets which makes modern life so pleasant, copper continues to hold the key to progress. *We've only scratched the surface.*

Ask *your* supplier how copper and brass can help you.

Copper or its alloys provide these advantages:



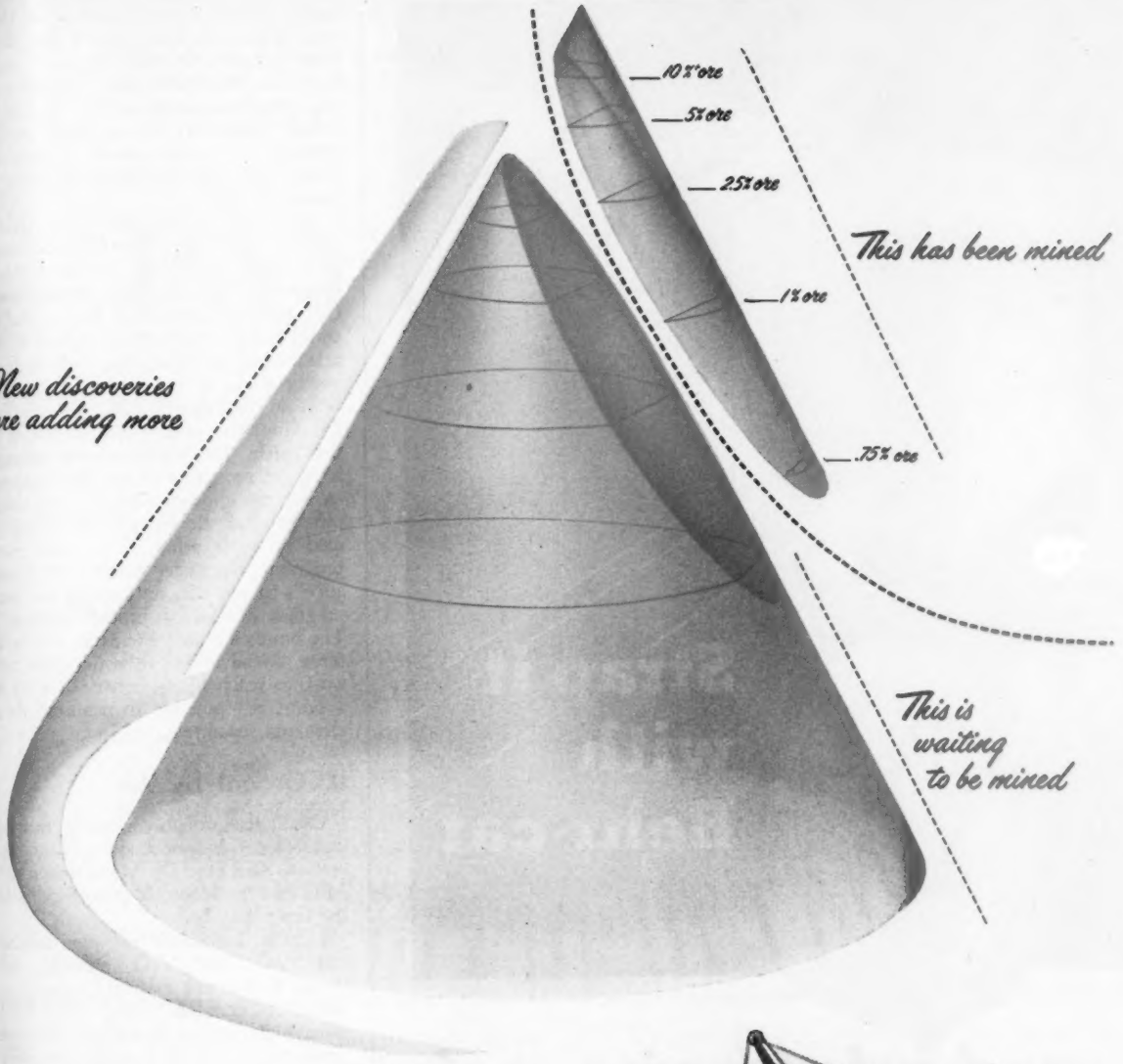
Best conductor of electricity commercially available.

Does not rust... high corrosion resistance.

Best heat transfer agent of all commercial metals.

Easy to machine, form, draw, stamp, polish, plate, etc.

Welds readily... excellent for soldering and brazing.



All these projects will be in operation by 1956

If all the copper ore in the U. S. were placed in one huge pile it would look something like this. As a rule, reserves have been mapped out precisely only at the site of mining operations and then only to the extent immediate plans require. There is no indication that a limit is being approached and reserves of ore appear adequate to maintain U. S. mine production at a high level indefinitely.

For instance, there are eleven new copper mining projects, both open pit and underground, which will be put in operation by 1956. Six of them have already started production. An estimated net of 250,000 tons of copper will be added to annual domestic mine capacity. The known reserves of these projects alone total over one billion tons of ore.

Project	Planned Production—Tons Copper per year	Start of Operation
Copper Cities, Arizona	22,500	Operating
Deep Ruth, Nevada	18,000	1955
Greater Butte Project, Montana	45,000	Operating
Kimbley Pit, Nevada	9,000	Operating
Lavender Pit, Arizona	38,000	Operating
Miami Extension, Arizona	11,500	1955
Osceola Mine, Michigan	7,000	1955
San Manuel, Arizona	70,000	1956
Silver Bell, Arizona	18,000	Operating
White Pine, Michigan	35,000	Early 1955
Yerington, Nevada	33,000	Operating

COPPER & BRASS RESEARCH ASSOCIATION

420 Lexington Avenue, New York 17, N. Y.



...and cut shipping costs

BEHR-CAT filament-reinforced strapping tape is fast revolutionizing shipping room practice everywhere. It sticks at a touch without wetting. It's unbelievably strong – packages stand up under rough handling. Customers prefer it for ease of unwrapping. Try it.
Behr-Manning Corp., Troy, N. Y.

In Canada: Behr-Manning (Canada) Ltd., Brantford.
For Export: Norton Behr-Manning Overseas Inc., New Rochelle, N. Y., U. S. A.



BEHR-MANNING CORPORATION
division of NORTON Company

▲ COATED ABRASIVES
▲ SHARPENING STONES
▲ PRESSURE-SENSITIVE TAPES

T-5

works already have a station of their own. Here, it's likely that if Du Mont sold or leased WABD, it would insist that Du Mont still rate a mention in any programming from this station.

• Net Gain–On the question of the network, if anyone stands to gain by taking over the Du Mont facilities, it would be ABC.

This network has hit some special troubles this fall. In an ill-fated coup, it wangled the NCAA college football program from National Broadcasting Co., paying $2.5-million for it. But it could find no ready sponsors, had to sell at a bargain, and lost close to $2-million on the deal.

More important, ABC shares with Du Mont the woes of the underdog in this battle. The whole network strategy is to get programs to get the audience to get the sponsors–and to get those programs on the air. All the elements feed on each other: The more good programs, the easier it is to get "clearance"–to get the stations to use your program instead of another network's. The more clearance, the easier it is to interest an advertiser in using your network to reach his audience. But up to a point it's possible to examine these elements separately.

II. Ordeal by Air

Clearance probably rates as the top requirement for successful network operation. And here Du Mont shares with ABC the problem of competing with the top networks.

Legally, a network may own and operate only five VHF stations and, thanks to a recent Federal Communications Commission ruling, two UHF (ultra high frequency) stations. The nets reach the rest of their market via affiliated stations, which may pick up some or all of the net programs, get part of the sponsor's cash for doing so.

In markets where there are four stations, there's no problem in getting cleared. But in a two-channel market, the smaller net is often squeezed off the air, especially if the market looks good to CBS or NBC.

The unfreezing of stations by FCC was supposed to ease this squeeze. But there's a great big catch. All the pre-freeze channels were VHFs. A great chunk of the new stations that came in when the freeze ended had to take a UHF channel.

• The Joker–That might still have been all right, but, over the protests of Dr. Allen B. Du Mont, FCC elected to allocate new stations on a mixed basis–some UFH stations going into markets that already had VHF's or would soon get them. If there's a VHF station in an area, advertisers just won't take the UHF, because the great bulk of TV sets are VHF. In other words,

Paving the way for the new tax laws on depreciation, a House Ways and Means Committee report (HR No. 1337) stated, "The average machine . . . actually depreciates considerably more and contributes more to income in its early years of use than it does in the years immediately preceding its retirement."

"PAYD"* PLAN

gears new equipment payments to fast depreciation

* "PAY-AS-YOU-DEPRECIATE", C.I.T.'s new plan, is based on the fast, more realistic depreciation schedules allowed by the new tax law. It offers you the best purchase plan for buying and depreciating new equipment.

"PAYD" helps you buy new machine tools, construction equipment and other profit-making, cost-cutting machines. Now 70% of the depreciation can be taken in the first half of the life of your new asset. And your "PAYD" installment payments are *geared directly to your new, fast depreciation allowance schedules.*

"PAYD" gives you new long terms

The "PAYD" Plan extends the time of financing on many kinds of equipment. Often the terms will match the entire useful life of the equipment. Terms are now ten years on machine tools and six years on construction equipment.

"PAYD" finance charge

The finance charge is 4.25% for each year of the term computed on the original unpaid balance.

"PAYD" opens the way for sound expansion

C.I.T.'s new "PAYD" Plan is the ideal method for buying needed new tools or equipment to expand—or beat competition. You retain your operating capital and acquire new profit-making equipment on a sound basis.

Consult with financing specialists

The "PAYD" Plan is a logical extension of the financing service C.I.T. Corporation has been giving industry for 46 years. Let one of our representatives put this experience to work for you. Write or call.

C. I. T. CORPORATION

The Wholly-owned Industrial Financing Subsidiary of C. I. T. Financial Corporation
Capital and Surplus over $195,000,000

DIVISIONAL OFFICES

Atlanta
66 Luckie Street, N. W.
Cypress 8621

Chicago
221 N. LaSalle Street
Randolph 6-8580

Cleveland
750 Leader Building
Main 1-4824

Houston
1100 E. Holcombe Blvd.
Lynchburg 3921

Los Angeles
416 W. 8th Street
Michigan 9873

Memphis
8 North Third Street
Memphis 5-6795

New York
390 Fourth Avenue
MUrray Hill 3-6400

Philadelphia
1530 Chestnut Street
Rittenhouse 6-8180

Portland, Ore.
Equitable Building
Capitol 9721

San Francisco
660 Market Street
Yukon 6-5454

there is little audience for a UHF program.

For the most part, the big networks have walked away with the best viewing time in the best markets. FCC reckons that 73 of the 100 top markets have only two VHF stations—and each of these stations has primary ties with either NBC or CBS.

• **Clearance Problems**—From the standpoint of the smaller nets this situation has improved greatly during the past year. Enough new stations have come on the air to make the going easier for them. ABC itself feels much less cramped than it did. In the past month or so, it has signed up affiliates in such new markets as Salt Lake City, Houston, and Tulsa.

But the situation is still acute. New stations are coming in much more slowly than predicted, because the competitive picture makes at least the early days of a station hazardous (BW—Feb. 20'54,p41). Taking over the Du Mont network would do this much for ABC: It would eliminate one competitor for those all-important clearances.

III. Battle for the Market

Television, like publishing, has two selling jobs: It must sell itself to the viewers; and it must sell the viewers to the advertisers. Here, again, the smaller nets are on the short end.

All the networks share one headache: the high cost of telecasting.

More and more, multiple sponsorships appear to be the answer—whereby a sponsor buys a segment of a show, 15 min. of a half-hour program, or a whole show on alternate weeks. CBS is firmly convinced that this is the best answer.

• **A Step Further**—NBC has carried this share-the-cost idea a step further in its famous "magazine concept" of TV selling (BW—Aug.21'54,p40). Here the network owns the show—as it may own a show that has multiple sponsorship. The aim is the same: to bring in advertisers who can't pay $90,000 for an hour of evening TV. But instead of selling a segment of the show itself, it will sell as many as four "insertions" to different advertisers on a half-hour program. The advertiser may buy a one-shot mention for $4,000, or he may buy a series of mentions—in which case the line between multiple sponsorship and the "participating programs," as NBC now calls the magazine format, gets pretty thin. Until now only three big shows have qualified as participating programs in the strict sense—Home, Today, and Tonight. Richard Pinkham, vice-president in charge of this operation, says NBC may extend the idea to other shows, perhaps on Saturdays.

• **Question**—How the big advertisers take to the participating programs is still



But—for Group Insurance—both pick Ætna Life

True enough! Business executives turned yachtsmen will disagree on the relative merits of motor and sail. But when it comes to employee benefit plans, thousands *agree* on Ætna Life. In fact, *more businesses are group insured in the Ætna Life than in any other company.*

If you are considering a group plan of life, health and accident, or pension insurance for your employees, ask your broker to contact an Ætna Life Group Representative. He'll tailor a program to suit your particular needs — and back it up with prompt, efficient handling of claims. He may be reached by calling the nearest Ætna office or by writing direct to this Company.

More businesses are group insured in the Ætna Life than in any other company

GROUP DIVISION

ÆTNA LIFE INSURANCE COMPANY

HARTFORD, CONNECTICUT



DINNER BY C. A. SWANSON & SONS; TRAYS BY FOIL KRAFT, INC.; FOIL COVERS BY PACIFIC COAST FOIL CO., DIV. OF JORGENSON & CO.

FOOD REVOLUTION–THROUGH ALUMINUM

THANKS TO a unique type of aluminum packaging, housewives are preparing complete piping hot meals for their families *in minutes instead of hours.*

An exciting example is the revolutionary Fried Chicken TV Dinner—a feast that's been pre-cooked to a turn, then quick-frozen, ready to heat and serve.

The aluminum foil cover seals in flavor, keeps out damaging moisture, air and light, protects the dinner so it can be shipped great distances.

The aluminum tray heats quickly and evenly. It's light and strong. And you can save it for dozens of other uses.

We worked closely with our customers in the development of this and many other low-cost aluminum packages and containers.

These include sealed foil food packets; wraps for dried fruits, bakery goods, frozen foods, candies, butter, margarine, cheese; case liners for produce; bags and pouches for dry foods.

As a basic producer of aluminum, we will continue to work with the packaging industry to help bring new convenience to you. Kaiser Aluminum & Chemical Corporation, Oakland 12, California.



EKCO-FOIL CONTAINERS BY EKCO PRODUCTS CO.

Aluminum containers like these simplify menus for millions of people by providing such no-work treats as roast turkey; swiss steak; beef pot roast; enchiladas; casseroles; beef, chicken, tuna, turkey and dessert pies.

Kaiser Aluminum

Setting the pace—in growth, quality and service



Lesson for today: How Fosbond locks paint to metal

Even when the heat's on, the Nesbitt ventilating and heating units in this modern Abington Township, Pa., school keep their smooth handsome finish. Thanks to the Fosbond® precoat, the paint resists the wear-and-tear of small-fry on the rampage . . . as well as the variations in temperature.

The secret is the way the Fosbond anchors the paint to the metal. After bonding itself firmly to the metal, the Fosbond coating presents a uniform surface of microscopic "teeth" which lock on the organic finish for lifetime adherence and protection.

Since John J. Nesbitt, Inc., adopted Fosbond, the company has not had one reject for paint adhesion. Cleaning and coating costs have been reduced.

If you use organic finishes on your product, you should know the full story of the Fosbond Process . . . and you should investigate the advantages of affixing the Fosbond-Good Housekeeping emblem to your products.

A free, one-hour survey of your finishing processes may make it possible for you to add more sales-appeal and lasting good looks to your products. Write: Customer Service Dept., Pennsalt Chemicals, 872 Widener Building, Philadelphia 7, Pa.

Pennsalt Chemicals

Pennsylvania Salt Manufacturing Co.

a question. So far, says Pinkham, few of the big ones have "participated." CBS is convinced the idea won't take. You get flexibility enough with the multiple sponsorships, CBS says, and the identification of sponsor with program is more complete.

For the advertiser who wants to make a big splash, there is color. NBC's executive vice-president Robert Sarnoff says that, after a shaky start, the color Spectaculars are doing nicely. The second, Lady in the Dark, scored fourth on Nielsen's list for that period.

Apparently the whole industry is moving in some such direction of cost-sharing of big shows. But the smaller nets are put to it to meet the cost of setting up a program of network-owned shows.

• **David vs. Goliath**—Against this kind of competition ABC and Du Mont are struggling. ABC exulted when its Disneyland show cracked the top 10 on the Trendex rating.

IV. Too Many?

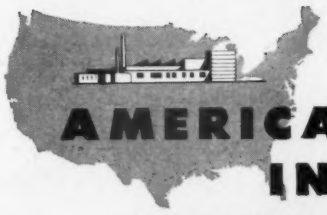
The question of the ability of TV to support four networks inevitably pops up. Many people believe there just isn't the market—in high-priced advertising or in audience—to go around. Television Digest points out that TV isn't like radio; advertisers with the kind of money TV takes just don't come a dime a dozen.

When it comes to audiences, too, the trade is doubtful. Says FCC, the networks claim that 50 stations of maximum power and height can reach 75% of the market. But FCC Commissioner Frieda B. Hennock, for one, believes there is room for four networks. One solution, she says: Sell more all-channel TV sets.

• **Still Running**—Officially, Du Mont is still in the running. The trade still doesn't write it off entirely. But for all Du Mont's denials, it has a strong hunch that it would like to get out of the network.

• **Antitrust Angle**—One important question might have to be answered first. When the government forced the motion picture industry to split up, Paramount Pictures had to peel off from the theater end of the operation. Later the theater group merged with ABC to form American Broadcasting-Paramount Theatres (BW—Feb.14'53, p31).

Meanwhile, Paramount Pictures had a 25% interest in Du Mont. FCC held that this interest constitutes a "controlling" interest. If Du Mont and ABC now got together, Paramount Pictures might be construed as being in the distribution end of entertainment in a big way. The antitrusters might well want to take a look at such a proposition.



AMERICAN INDUSTRY TURNS TO HOLLAND



to maintain export sales in non-dollar areas

Royal Typewriter Starts Overseas Manufacturing in the Netherlands



Mr. Fortune Peter Ryan, President of Royal Typewriter Company, Inc., a U. S. Company, now producing Standard typewriters at their Dutch plant.

While Royal standard typewriters have long been exported to 96 foreign countries, manufacturing operations were, until recently, carried on only in the United States and Canada. Last year, the company made the major decision to begin overseas production, and chose Holland as the site of its operations.

"Dutch officials and business men alike cooperated enthusiastically in the establishment of the new venture," said Fortune Peter Ryan, Royal Typewriter President, at the time of the official opening of the plant on January 29, 1954. "Dutch personnel worked so smoothly with Royal engineers that the *first* typewriters were turned out in only 7 weeks. This promises continuing smooth production so essential in the manufacturing of typewriters."

Royal's experience is typical of that of the many American companies who have established Dutch plants. One reason that has focused interest on the Netherlands is the low capital investment required. Land costs are moderate, and plant erection is often financed in Holland on a rental-with-option-to-buy basis.

Other advantages are to be found in the freedom from government restrictions and from import duties on raw materials, and in the country's economic and social stability.

Profits can be transferred to the United States in dollars, and dollar investments can be retransferred.

The skill, adaptability and conscientiousness of the Dutch worker are important factors in economical *production,* and excellent transportation facilities are of equal value in economical *marketing.*

Water, road and rail link Holland with other European countries and large seaports permit easy shipment to the rest of the world.

To assist American industry in evaluating the advantages of operations in Holland, the Netherlands government has assigned to a single agency — the Netherlands Industrial Institute — the handling of all contacts with American companies considering overseas operations.

Detailed literature containing answers to all major questions pertaining to establishment of American industry in Holland is available on request.

NII

NETHERLANDS INDUSTRIAL INSTITUTE

NETHERLANDS INDUSTRIAL INSTITUTE

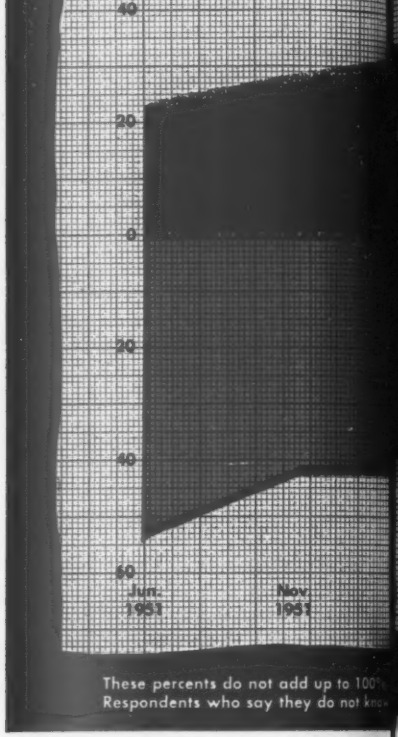
Room 48, 1-M-M, The Biltmore, New York 17, N. Y., LExington 2-5069

Survey of Consumer Attitudes

This autumn's study by the Survey Research Center of the University of Michigan shows an optimistic picture.

QUESTION:

"Do you feel that this is a good time to buy furniture, refrigerators, and other large household items, or a bad time?"



Consumer Confidence: Lower

One of the salient business facts during the past year has been the almost unshakeable confidence of people generally in the underlying strength of the economy. Consumers took a careful look at the storm signals raised by the economists, examined their own pocketbooks, and decided that they weren't so badly off—and weren't going to be. In short, they went right on spending, an act of incalculable importance to the U. S. economy. Any serious faltering of confidence might well have turned recession into depression.

The relatively happy state of affairs over the past year was forecast in two studies of consumer attitude and inclination, made just a year ago and again in June, by the Survey Research Center of the University of Michigan. Now the same group has just finished another such survey of expectations regarding the purchase of major consumer goods, the things that are generally regarded as being postponable or "discretionary." Once again the picture for U. S. business turns out to be a bright one.

• **Random Sample**—The nationwide sampling of opinion, conducted in October under the direction of George Katona, was privately financed. It is based on a random sample of 1,100 families. Here—first published in BUSINESS WEEK—are the chief gleanings:

• Though the inclination to buy has not yet reached the levels of late 1952, when consumer optimism was at a peak, it is still measurably greater than it was in either of the two most recent surveys. Says SRC:

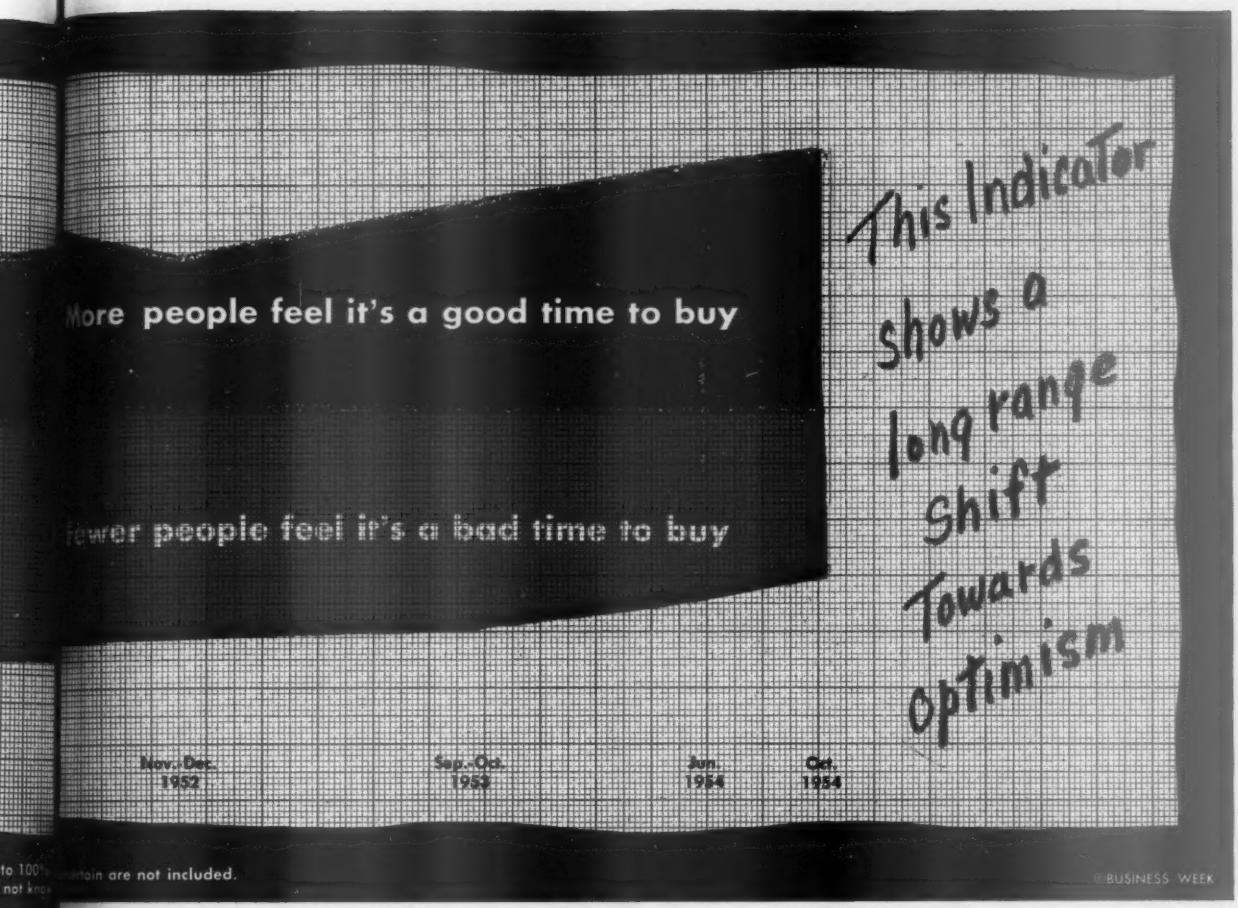
"The outlook for sales of automobiles and large household goods for the next six or nine months, dependent of course both on consumer resources and consumer sentiment, is better than at the end of 1953."

• This cannot be construed, however, as indicating that a boom is on the way. "On the contrary," cautions SRC, "it appears that the rate of consumer saving will remain, viewed from a historical perspective, quite high."

Actually, no great shift in consumer inclination has occurred over the four months between the June, 1954, and October surveys, and where changes have taken place they are not always significant statistically. What is important, however, as past SRC studies have made clear, is the direction of the changes. Hence, when the major tests are applied, it is apparent that consumers are in a buying mood that is slightly more buoyant than a half year ago, even more so as compared with a year ago.

• **Weighted**—To get an index of people's buying intentions, the researchers at the center weigh other factors besides the answers to the question "Do you think this is a good or bad time to buy?" (chart above). When people decide to buy a major item, they naturally take into consideration a number of factors. The weight that should be given to these factors depends on the nature of the times—for example, developments in the cold war and how much anxiety they produce here in the U. S.

At present, SRC is weighing six other factors besides the one shown in the chart above. These six are: people's



Than 1952, but Rising

appraisal of their own financial status (present and future), their income changes, their opinion of short- and long-range economic outlook of the country, and their attitude toward prices.

A look at these factors will show that people in the upper income brackets, whose combined buying power makes them of particular importance in consumer markets, continue to be more optimistic than all consumers together. This is no surprise; upper income groups have consistently been reporting that they have been touched more lightly by the recession than have the people in the brackets below them. In fact, the events of the past year or so have in some ways improved the economic position of the upper income groups, where they have done just the opposite to the $5,000-and-below income group.

• **The Lower Brackets**—Here, however, a change may be in the making, though as yet it is still too early to say for sure. The SRC researchers make this observation:

"There is some evidence that most recent improvement in consumer attitudes is slightly more pronounced among families with incomes below $5,000 than among those with higher incomes."

What are the reasons for the gradual recovery of consumer optimism during the past year? Three reasons stand out:

I. People's Own Finances

There are two key questions in this area:

"Would you say that you and your family are better off or worse off financially than you were a year ago?"

"Do you think that a year from now you will be better off financially, or worse off, or just about the same as now?"

SRC makes a careful distinction between financial status and income. The researchers also ask people about their actual income (is it up or down?), weigh the answers with those they get from the two questions above concerning finances. An interesting point here emerges.

As is only to be expected, many people report a decline in actual cash income from the year-ago level. There has been no significant change here between the last survey in June and this one. In June, 25% reported a decrease in income; last month 27% so reported. At the end of 1953 only 18% reported a decrease; only 15% reported a decrease in late 1952.

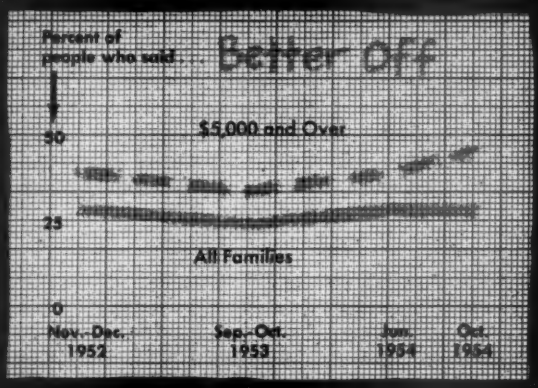
This situation, however, is not reflected in the answers to the questions concerning how well financially people think they are doing (charts, page 126). The reason lies in living costs. These have not risen for the past year or so. This has brought about a considerable difference in attitude. Previously, during inflation, people used to say they didn't feel better off financially even when their income went up. Stable prices have eased conditions for a lot of people.

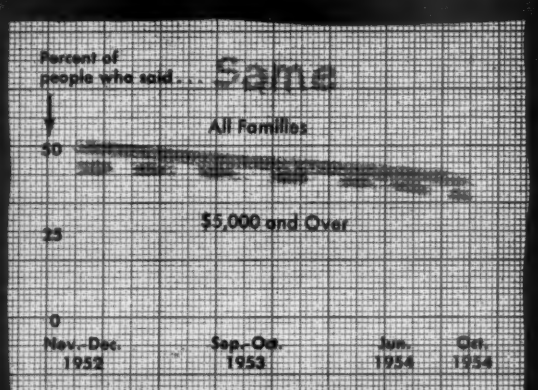
• **Jobs**—How do people feel about their employment? Do they feel secure?

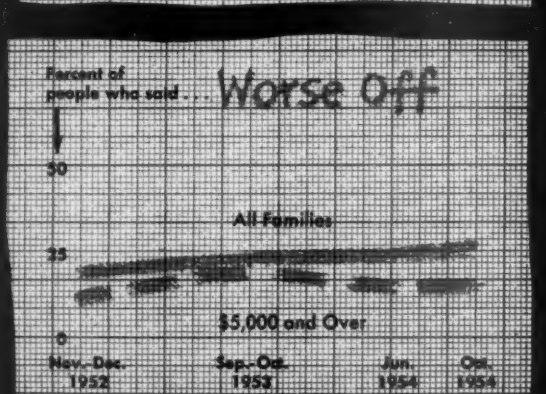
They are certainly aware of unem-

Financially – No Change

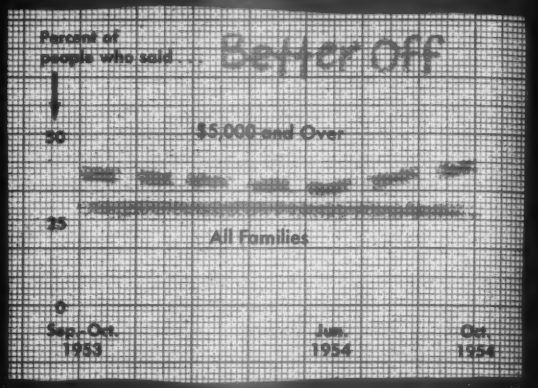
QUESTION:
"Are you better or worse off financially than you were a year ago?"

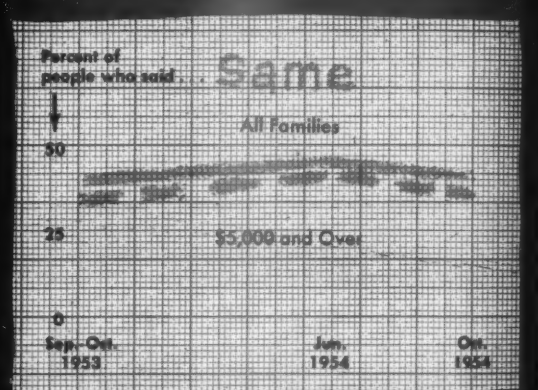


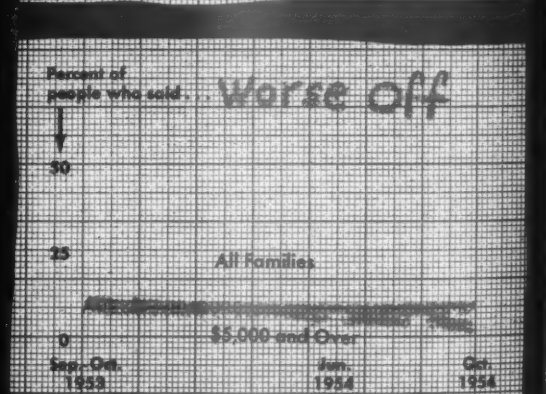




QUESTION:
"Do you think that a year from now you will be better or worse off financially than you are now, or just about the same?"





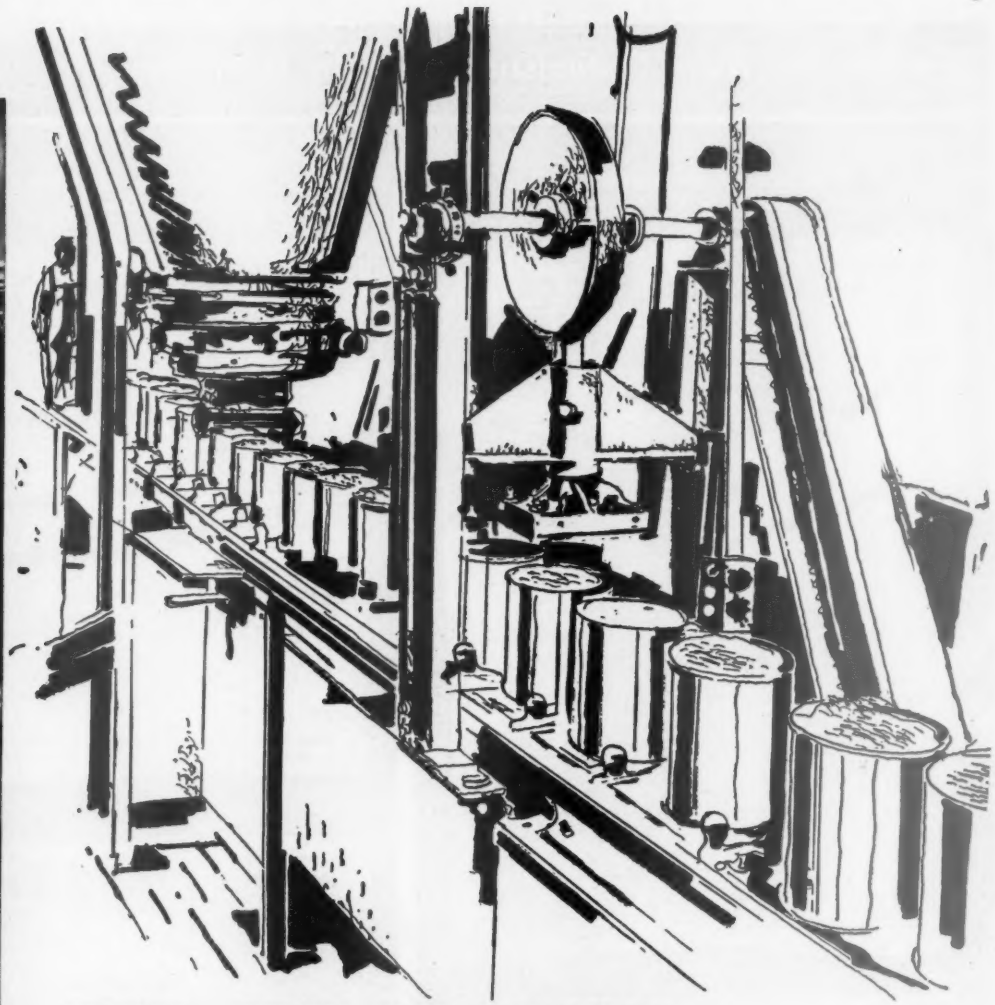


ployment. When asked, "Has there been any unemployment around here that you have heard of?" close to two-thirds of all urban people said "yes." Most of these said that acquaintances of theirs have been out of jobs recently.

Nevertheless, they are seemingly not insecure in their own jobs. One of the questions asked was this: "Suppose that you lose your job for any reason during the next few months; what do you think are the chances of getting another job that pays about the same?" More than half of the families on wage or salary incomes (excluding the self-employed, the retired, and housewives) answered this question by saying the chances are "good" to "fairly good."

One-quarter took a gloomier view, replying without qualification that the chances are bad. Yet this is not the whole story, for most of these people do not expect to lose their jobs. In answer to the question about financial expectations during the next year, only one family in nine says that a year from





REM-CRU TITANIUM...

new key to industrial progress

In the FOOD PROCESSING Field

REM-CRU titanium's unequalled resistance to most forms of corrosion, its light weight and high strength, make it the new key to processing efficiency.

Titanium's absolute resistance to the attack of residual salt in sea water, for example, puts an end to corrosion damage in fish packing equipment. It's an equally good choice for agitator blades, packaging machine parts, equipment subjected to repeated cleaning with caustic chemicals—anywhere that severe corrosive conditions exist.

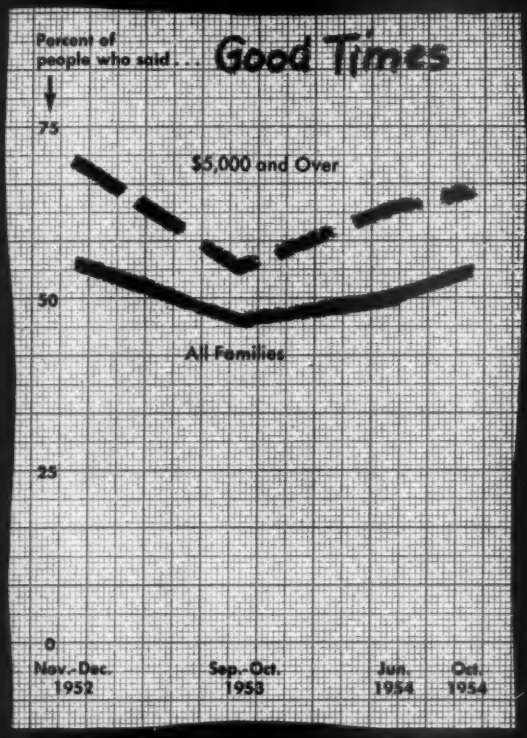
And expanded facilities at REM-CRU have released ample quantities of this new metal for nondefense use. Prompt delivery of REM-CRU titanium is assured . . . in bars, plates, sheet, strip, wire, tubing and forgings . . . in many sizes and grades . . . even in the new high-strength, weldable alloys.

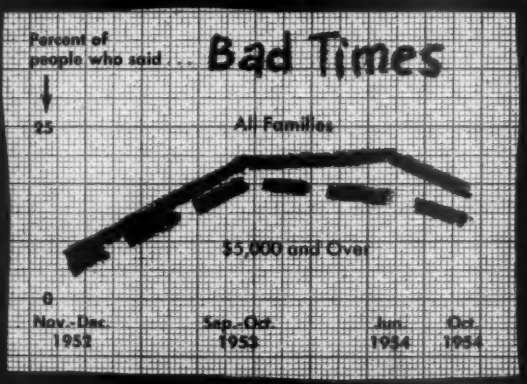
So take advantage of titanium's many advantages . . . its tremendous resistance to most forms of corrosion . . . its light weight combined with exceptional strength . . . and its ability to be fabricated by normal shop practices. It will pay you to explore the possible uses of titanium in your plant. A REM-CRU engineer can help with practical, down-to-earth suggestions.

REM-CRU TITANIUM REM-CRU TITANIUM, INC., MIDLAND, PENNSYLVANIA

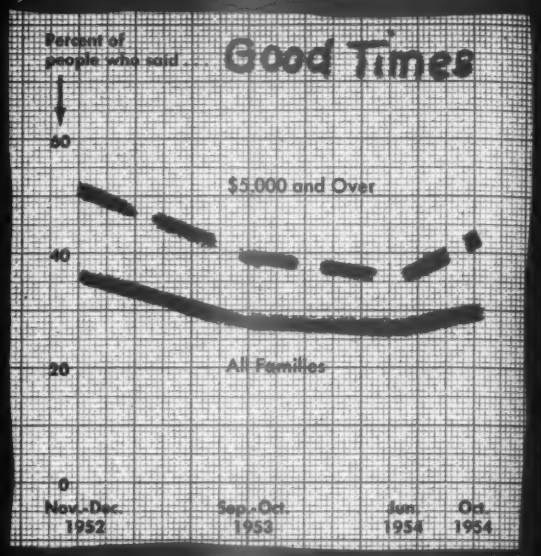
People Are More Optimistic About the Economy

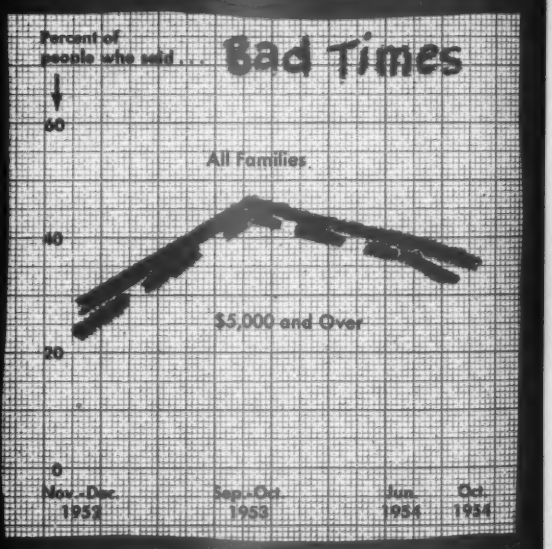
QUESTION:
"Do you think that during the next 12 months we'll have good times, bad times?"





QUESTION:
"Do you think that during the next five years we'll have good times, bad times?"





now they expect to be worse off than at present.

II. The Economic Outlook

People know the economic score. They are well informed. They are quite aware that there has been a recession in the recent past. As proof, it is only necessary to note that many more people judge that business conditions have deteriorated during the past 12 months than judge that they have improved. However, there appears to be an increasing optimism on this point; the answers show some improvement since June (charts, above).

In looking at future economic trends, people have taken a decidedly brighter view than they did in June. The situation, in fact, has reversed. There are now more people who expect that business conditions will improve in the next year than there are who expect they will be worse. The great majority, however, say that there will be no change during the next 12 months. Yet even this group has grown more optimistic, for when asked whether they think the prevailing situation will be good or bad, the majority voted for good times. Furthermore, the proportion saying so is somewhat higher than it was four months ago.

In general, the same trend has been at work where the five-year look at the



NATIONAL OIL SEALS ®

help keep the roll in roller freight

Modern freight is roller freight. Lickety-split schedules, smooth diesel power, hours less for servicing, freedom from hot boxes that halt trains and delay important shipments.

As roller bearings in car journals make this newer, better railroading possible, so National Oil Seals help keep it possible. National Oil Seals keep lubricant around bearings, keep dirt and water out, insure dependability under all operating conditions.

National Oil Seals doing this vital job on major railroads are cousins to other National Oil Seals supplied for every make of automobile, truck, bus and tractor. National has designed and manufactured almost a *billion* oil seals for America's automotive and farm implement industries; millions more for machinery of all kinds, aircraft and household appliances.

NATIONAL MOTOR BEARING CO., INC.

General Offices: Redwood City, California. **Sales Offices:** Chicago, Cleveland, Dallas, Detroit, Downey (Los Angeles County), Milwaukee, Newark, Van Wert, Wichita. **Plants:** Redwood City, Downey and Long Beach, California; Van Wert, Ohio. **Products:** Oil, Fluid and Grease Seals, O-Rings, Airtron® Ducts, Silicone parts, Shims. 3147

DANLY



A line of Danly Presses in a contract stamping shop

This line will turn out more finished stampings per shift, will set new production records in both cost and time savings.

Finished Stampings

COST LESS ON A DANLY LINE

You get more finished stampings per shift with a line of Danly Presses. Each Danly Press maintains steady, uninterrupted production. Running together as a line, they turn out more stampings because there are fewer line shutdowns.

Danly's heavier construction is your best insurance against costly shutdowns. Also, look for complete automatic lubrication supplying clean filtered oil to gears, bearings and gibs; extra rigidity to minimize deflection and vibration, increase die life; exclusive electrical and pneumatic control devices for convenient automation and safer operation; cooler running, longer-wearing clutch and brake. From bed to crown, every Danly press is engineered for dependable performance.

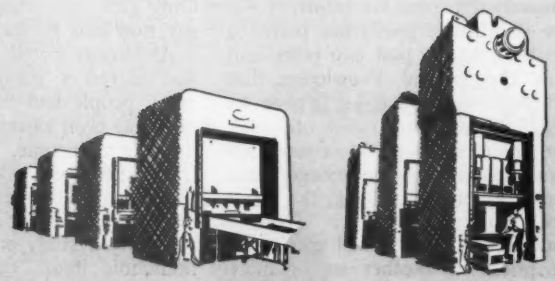
That's why Danly Presses are setting new standards for operating efficiency—in many of the country's leading stamping plants. Danly press engineers are at your service . . . write today to have them give detailed attention to your specific stamping problem.

DANLY MACHINE SPECIALTIES, INC.
2100 South Laramie Avenue, Chicago 50, Illinois

A line of Danly Underdrive Presses in a mass production plant

The dependability of each Danly Press is a vital factor in the production efficiency of automated lines like the one shown here.





Danly offers any press you need . . . single, double or triple action . . . overdrive or underdrive. Make your press line a Danly line and save costs at every stage of your operation from blanking to finished stampings.

DANLY



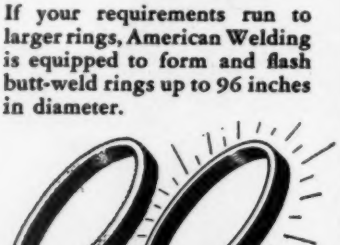
RINGS 6-INCHES...

Circular components . . . rings and bands in diameters as small as 6 inches?



...OR 96-INCHES

If your requirements run to larger rings, American Welding is equipped to form and flash butt-weld rings up to 96 inches in diameter.

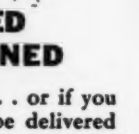


ROUGH FORMED OR MACHINED

Furnished rough . . . or if you prefer, rings can be delivered finished-machined to your exact specifications.

Call AMERICAN WELDING

Welding often proves to be the most practical and economical method of fabricating, not only of circular but other types of welded components. For a complete description of what American Welding can do for you, call or write our Product Development Division. They will be glad to look into your particular problem.



SEND FOR FREE CATALOG of American Welding Facilities—today.

THE AMERICAN WELDING & MANUFACTURING COMPANY
380 DIETZ ROAD • WARREN, OHIO

Price Plays a Big Part in the Thinking

QUESTION:
"Why do you think that this is a good time or a bad time to buy?"

	Nov.-Dec. 1952	Sep. 1953	Jun. 1954	Oct. 1954
Why it's a good time to buy				
Prices going up	6%	6%	6%	7%
People can afford to buy now	8	11	7	7
Prices lower; oversupply of goods	3	8	17	22
If you need things (and you have the money) there is no reason why you shouldn't buy now	11	13	18	7
Prices are stable	1	5	6	12
Other reasons	9	11	11	10
Why it's a bad time to buy				
Prices are high	24	18	14	19
Conditions now are uncertain, or bad times ahead	6	7	8	6
Prices will remain stable or fall	11	17	9	10
People can't afford to buy now	1	4	9	8
Other reasons	10	4	3	3

These percents do not add up to 100%.
Respondents who say they do not know or are uncertain are not included.

© BUSINESS WEEK

economy has been involved. Once again, there has been a trend toward more optimistic answers on this score, too. However, they are still considerably more pessimistic than in 1952.

III. Prices

Price has a great deal to do with the way people evaluate buying conditions. It weighs heavily when people consider the question "Do you think this is a good or bad time to buy major household goods?" This question was a particularly good indicator in 1951 when the answers showed a low point.

The stability of prices has played a big part during the past two years, and so has the general knowledge that "good buys"—meaning high trade-ins and big discounts—are easily obtained. In the most recent survey, four times as many people as two years ago made favorable comments about the price situation (table, above).

• **Confidence**—When asked specifically about prices in another set of questions, people showed a generally increasing confidence in the stability of the price structure. Back in late 1952, 40% of the people interviewed by the Survey Research Center said that they expected "no change" in the prices of household goods and clothing over the next 12 months. In the study made a few weeks ago, the number had increased to 49%.

Meanwhile, the number who expect prices to fall has also increased. Two years ago 26% thought prices would fall over the coming 12 months. The latest study puts the number who look for a generally declining price level at 30%.

Far fewer people say they anticipate increases in prices during the year. Only 12%, according to the latest survey, now look for increases.

As already noted, price stability has also played a major role in making many people feel that they are better off today even where there has been no increase in income.

The SRC researchers add one other hopeful note to their appraisal of people's current buying intentions. Though the current study only concerns major household items, they point out that "consumers' expressed intentions to buy automobiles and houses are consistent with their appraisal of buying conditions."

'55 Cars Cut Rate

Unorthodox stunts by dealers reflect strong market . . . Soft drink bottlers watch Dr. Pepper . . . U.S. firm sues big Canadian retail chain over trademarks.

"The whole country seems to be going car crazy, and we love it."

This is how one automobile factory spokesman last week expressed his feelings about two developments that are showing up all over the U.S. First, dealers have been breaking the release dates on new cars, selling them at a fast clip before the 1955 models are officially introduced. Second, 1955's are already showing up on used car lots from coast to coast in surprising numbers. Both developments seem to be a tribute to the strength of the market, but their causes are far different.

The sale of new cars before the official introduction dates was caused by the cleanest inventory "cleanup" in recent memory. Many dealers were actually sold out of 1954 models several weeks before their 1955 cars were scheduled to go on sale.

The dealers didn't choose to sit around for a couple of weeks doing nothing, so as fast as the 1955 models arrived they quietly tipped off prospects. The factories knew what was going on and merely cautioned dealers to be sure to hold back enough cars to show on official announcement days.

Experienced auto men see two causes for the fact that the new cars showed up so quickly on used car lots. One was routine, the other a reflection on the powerful sales appeal of a new model car.

The routine reason is that a few dealers in widely separated parts of the country always rush a new model to an auctioneer for sale to a used car dealer, to get a realistic index of the car's market value.

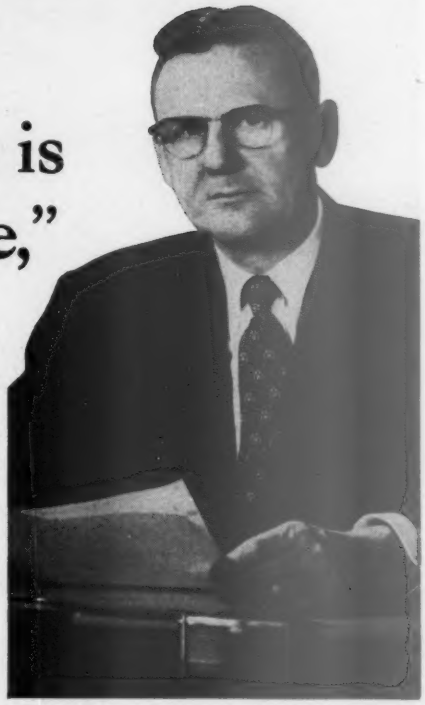
But a great number of new models on used car lots have been bought directly from a dealer—through a third party—at more than list price. Through the past year, when bootlegging flourished, the used car merchants were using 1954 models as show pieces to draw customers. Now the used car people feel they will lose that traffic unless they have 1955 models on display.

●

Cash-discount coupon cards are being punch-coded by Procter & Gamble Co. in test market areas. The company says this way it can check how many of the giveaway coupons customers use, in

"Our face is our fortune,"

says George C. Foerstner, Amana Executive Vice Pres.



"Or let's say it's a big part of our fortune," continues Mr. Foerstner.

"We prize the flawless finish of our Food Freezers highly — and so do housewives. In fact, as much care is taken in the manufacture of this finish as in any other part of the unit.

"We can't afford to have it marred after it leaves us. That's why we ship all our products in Atlas Plywood containers."



Gleaming beauty. Amana's pride in the shining finish of its Food Freezers is understandable. To protect these gleaming beauties which weigh 300 pounds, Amana sought the advice of Atlas Plywood packaging engineers. It was obvious that, if not properly packed for shipping, the weight could prove destructive when the unit underwent the jolts, bumps and strains of travel. What's more, the inside mechanism could be damaged.



Atlas Plywood Engineers designed this sturdy, *lab-tested* container that will absorb the shock of shipment, warehouse handling and dealer delivery.

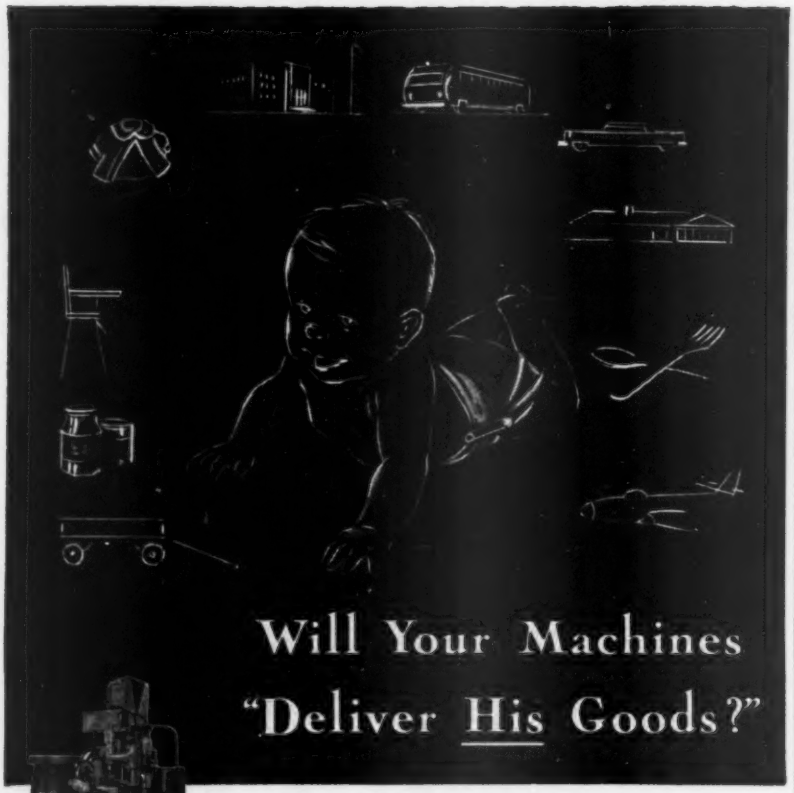
Amana not only gains protection by this packaging but saves plenty of money besides; the container is light-weight as well as strong and its strength is so dependable Amana can now pack up to the load limits. No waste space in freight car or in storage.

Atlas Plywood
CORPORATION
FROM AMERICAN FOREST TO FINISHED PRODUCT
PLYWOOD CONTAINERS • FLUSH DOORS • HARDWOOD PANELS

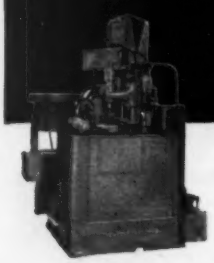
LAB TESTED ®



What about you? Do you risk wasted dollars due to product damage or increased shipping costs from unreliable containers? Send for free informative, illustrated 24-page booklet, "How Atlas Plywood Cuts Your Shipping Costs . . . Safely," — or see your Atlas Plywood representative (Classified Telephone Directory). Learn about the remarkable testing laboratory where Atlas Plywood containers win their *lab-tested* label. Atlas Plywood Corporation, Dept. BW-3, 1432 Statler Building, Boston 16, Massachusetts.



Will Your Machines "Deliver His Goods?"



MODEL 7A "AUTOMATION" HOBBER

Every 8 seconds a future potential customer of yours is born in this country. Will the machines you buy today have the capacities to produce his needs?

For an average of 60 years or more he will continue to consume goods made by American Industry. His collective appetite for new and better products will be tremendous.

This growing market is a prime reason why industry must give serious thought now to planning tomorrow's productive capacity.

Today's ten year old machines are costing money at every turn. And the cost goes up as time goes by.

Why not beat obsolescence to the punch . . . starting today? Call in your Lees-Bradner representative or get in touch with us direct. Let us prove that modern hobbing and threading equipment can save you money and prepare your company to meet the needs of the future.

the LEES-BRADNER Company

CLEVELAND 11, OHIO, U. S. A.



5H SPLINE HOBBER | 7-A ROTARY HOBBERS | CRI-DAN THREADING MACHINES | NT THREAD MILLER | 12-S HOBBER

IF YOU THREAD OR HOB . . . GET A BETTER JOB WITH A LEES-BRADNER

what areas, and on what free offers. P&G expects to adopt either IBM or Remington-Rand punch-cards early next year, depending on reaction of its retail customer-stores.

●

The new look in the kitchen (BW–Nov.20'54,p31) has been adopted by Westinghouse Electric Corp. The company's 1955 major appliances feature a line of built-in ranges, refrigerators with fountains that spout two flavors of juice or cola, and colored models.

●

Carpet makers are turning to tufted floor-coverings of cotton and synthetic fibers in an effort to pull out of the industrywide sales tailspin.

This trend was pointed up last week, when James Lees & Sons Co.–second biggest carpet manufacturer in the U.S.–announced that it is discontinuing production of woolen yarn at its Bridgeport (Pa.) plant. Lees will still make some wool yarn elsewhere.

Lees is the industry's only maker to show a slight sales gain this year–1% for the first nine months. Lees attributes this partly to the fact that this year it has spent $300,000 upping production of its cotton and synthetic tufted rugs. The entire industry is expected to boost tufted production 40% this year. Wool production is steadily going down.

●

Discount house advertising, a rare phenomenon up to now, may be spreading. E. J. Korvette & Co., New York cut-rater, is planning a $200,000 ad campaign, including newspaper, magazine, radio and TV plugs. Korvette says it will tie in with manufacturers who want to participate, and that the ads won't stress the discounters' cut prices.

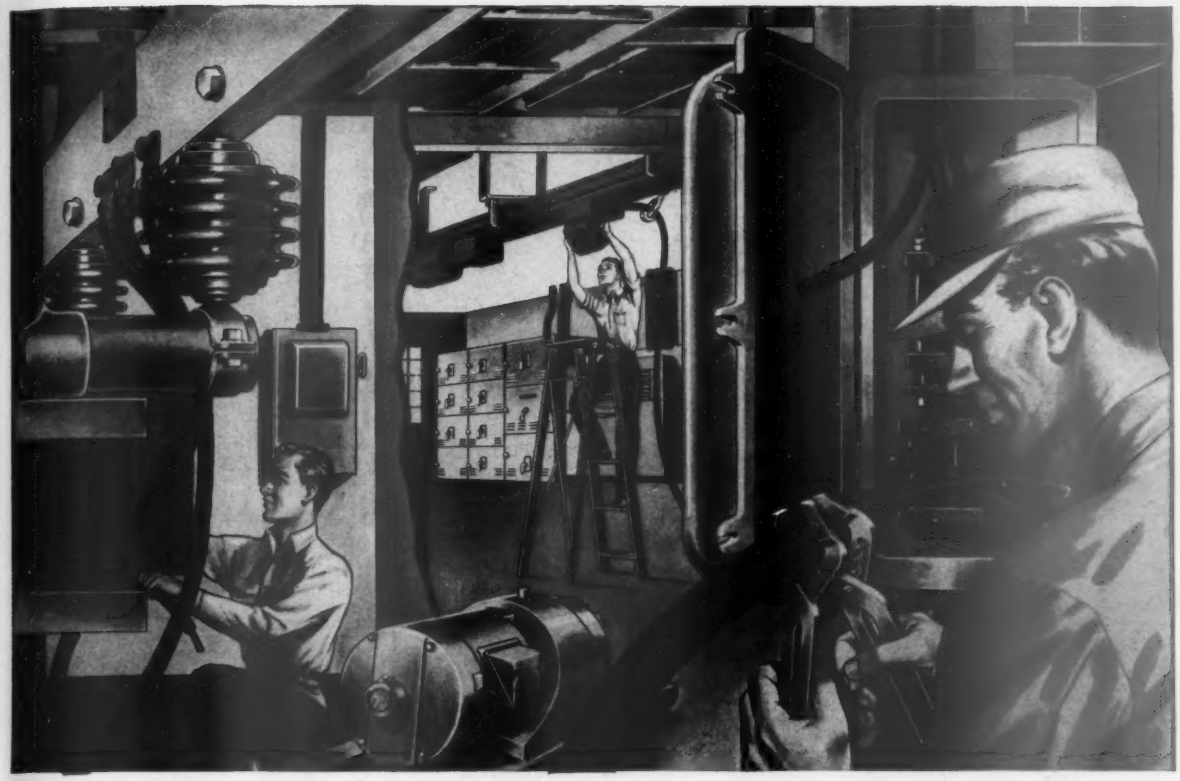
●

New beer package sizes are getting a tryout by the big national brewers. Pabst Brewing Co. is marketing a new 16-oz. can similar to the one introduced last summer by Jos. Schlitz Brewing Co.; and Anheuser-Busch, Inc., is now putting out its Budweiser beer in fifth-size bottles and 10-oz. cans.

●

The eyes of the soft drink industry are on Dr. Pepper Co.'s efforts to find out how consumers feel about the battle of bottles vs. cans.

Franchised soft drink bottlers are worried over the inroads cans have made on their business (BW–Oct.16'54, p148), and are waiting apprehensively to see what the big soda pop manufacturers plan to do. At a meeting in Philadelphia last week, Dr. Pepper told the American Bottlers of Carbonated Beverages that it is test-marketing both cans



Power distribution systems that can effectively handle future demands are the surest way to avoid electrical obsolescence and costly rewiring.

Local Graybar Representatives will work with you and your electrical contractor in the selection of wiring and equipment to meet today's needs . . . and tomorrow's.

"Plan in" future plant flexibility . . . today

Two FREE booklets on new mineral-insulated wiring system

Mineral-insulated cables available via Graybar represent today's newest wiring method. Acting as its own conduit, m.i. cable trains to any contour . . . is unaffected by weather, corrosive vapors, cold or flame.

1. Type m.i. safety mineral-insulated cable — booklet provides complete information on conductor characteristics and suggested applications.

2. NELEX Mineral-insulated heater cable — pertinent data on how it can lower heating costs and provide a higher safety factor is contained in this illustrated booklet.



Planning extra power capacities for future expansion is an important consideration in new plant construction. Today's pressure of electrical growth often outstrips power-carrying capacity long before the equipment itself becomes outmoded. This then is the most important reason why it pays to call Graybar *first* on any wiring project. A Graybar Inside Construction Specialist can not only help you determine a power-distribution system to satisfy present and near-future needs, but also to "plan in" flexibility for long-range expansion.

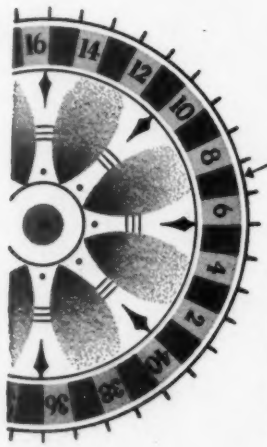
Over 100,000 different electrical items are distributed by Graybar through its nationwide system of offices and warehouses. Complete catalog and quotation service covering them is available to help you work out job costs and specifications—for lighting, power, control, ventilation, communications, as well as wiring. 470-211

CALL GRAYBAR FIRST FOR . . .

Graybar Everything Electrical

IN OVER 110 PRINCIPAL CITIES

Graybar ELECTRIC CO., INC.
420 Lexington Avenue, New York 17, N. Y.



How's your luck today?

Some say you're born with it—or without it. Or that you get it from a charm or amulet. Others say that luck comes as a result of real application to the job. We lean to the latter belief. In our experience making and selling hydraulic presses, we've observed that many of our customers have been very successful . . . lucky, you might say. We like to think that *our* close attention to the building of presses enabled those customers, in turn, to do a better job of turning out *their* products. You wouldn't be pressing your luck too far to ask us to send our newest catalog. In fact—it might be a turning point (for the better) in *your* business!

R. D. WOOD COMPANY

PUBLIC LEDGER BUILDING • PHILADELPHIA 5, PENNSYLVANIA

Representatives in Principal Cities

MAKERS OF HYDRAULIC PRESSES AND VALVES, FIRE HYDRANTS, CAST-IRON PIPE, GATE VALVES, GAS PRODUCERS, ACCUMULATORS



Getting your share of the Western "Pie"?

Are you wondering why other firms take the "lion's share" of this $32,000,000,000 Western Market? Could it be prohibitive freight rate differentials?

The answer is a plant located in the West! Not just anywhere—but at the population and distribution CENTER of this rich, new market. On the map it's Santa Clara County, California, at the southern tip of San Francisco Bay.

WRITE TODAY *for the free booklet, "32 Billion Dollar Market." See why a Santa Clara County plant brings you closer to greater profits.*

SAN JOSE CHAMBER OF COMMERCE
Dept. B-4, San Jose 14, California

Santa Clara County *California*

Decentralized, YES! Isolated, NO!

for any building job!

. . . use

FIR PLYWOOD

Large, light, strong, real wood panels save time and labor on maintenance or new construction. A type and grade for every need. For 1954 catalog, write (USA only) Douglas Fir Plywood Association, Tacoma 2, Wash. Or see your lumber dealer today!

Buy Only DFPA-Grademarked Panels

WHEN BUSINESS MEN WANT BUSINESS NEWS THEY TURN TO.....

and bottles in St. Louis and Dallas, to see which its customers really prefer. Both the 6-oz. bottles and the 12-oz. cans are getting equal promotion. The tests will run for six months.

ABCB is anxious to find out how big a share of the market the cans will bite off. It thinks it got some of the answers in a survey it made of 825 consumers. The survey showed that only 34% bought canned pop during that period. The study also showed that only 19% would pay more for cans.

But this survey, as well as a similar one conducted by the Glass Container Manufacturers Institute last summer, showed that cans have already caught on to a surprising degree in the past year.

●

Air-conditioned autos will pass the 1-million mark in the next six or seven years, General Motors Corp. thinks. During the past two years, about 125,000 have been sold.

●

Two huge parking garages were opened by downtown department stores last week in the fight to ease urban shopping problems. May Department Stores' M. O'Neil Co. in Akron unveiled what it calls the biggest downtown store garage "anywhere," a four-deck building that can handle 3,000 cars per day. In Salt Lake City, Zion's Cooperative Mercantile Institution opened a 10-level garage with an estimated 1,400 car-per-day average capacity.

●

A U.S. women's underwear manufacturer is suing Canada's biggest department store chain for "purloining" its trademark.

Vanity Fair Mills, Inc., charges the T. Eaton Co., Ltd., advertised and sold its own "cheaper and inferior" underwear marked with the "Vanity Fair" name. Vanity Fair says it has sold its underwear through Eaton for a number of years. The Canadian department store chain and mail order house substituted either its own make or underwear manufactured for it, the U.S. company charges, and sold it in its stores and through the mails to Vanity Fair Mills' Canadian customers.

Vanity Fair Mills' suit says this practice has "greatly damaged" its name and business, and asks a New York federal district court to grant it an injunction and "heavy damages."

Eaton denies the charges, will file an answer in court this week stating that it has owned the "Vanity Fair" trademark in Canada since 1915. This trademark covers a whole line of apparel made up by various manufacturers, the Canadian company says, including women's underwear.



Bond metal to metal without heat or pressure

You can safely fasten metal to metal—even metals with different thermal coefficients—with the new Armstrong J-1151 Adhesive. No heat or high pressure is needed. Resulting joints develop tensile strengths as high as 2,000 psi.

Only enough pressure to insure contact is needed for a firm bond. This makes J-1151 particularly adaptable to bonding contoured metal shapes, especially shapes with compound curves. Armstrong J-1151 is a ready solution, too, for the problem of joining materials that might be damaged by heat or pressure—light gauge metals and glass, for instance, or foamed plastics.

Even non-porous materials such as highly finished metals and glass can be permanently joined. Armstrong J-1151 forms a rigid bond that is highly resistant to chemicals, solvents, hydraulic fluids, and oils. There is virtually no shrinkage, so J-1151 can safely be used for such precision work as bonding dial faces to gauges, scale plates to measuring devices, or any similar application where distortion cannot be tolerated.

For further information on J-1151 or other Armstrong Adhesives, write for a copy of our 36-page 1954 manual, free to industrial users only. Armstrong Cork Company, Industrial Division, 8011 Indian Road, Lancaster, Penna. In Canada, 6911 Decarie Blvd., Montreal.

Armstrong

ADHESIVES • COATINGS • SEALERS

. . . used wherever performance counts



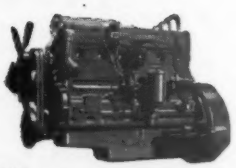
NEW space-saving, high economy, big capacity COE models—3 series, 12 models from 21,000 to 30,000 lbs. GVW—50,000 to 65,000 lbs. GCW. Also available with Sleeper Cab.

NEW MODELS NEW FEATURES

INTERNATIONAL keeps 'em coming... all the time, to do today's truck jobs better, at lower cost!

INTERNATIONAL continually brings you great new truck features, new all-truck models, new value for your truck dollars, in the world's most complete truck line. INTERNATIONAL follows this policy to give you right now the developments that will help you do your hauling jobs better, cut your costs and boost your profits. Before you make any truck purchase, check all the new developments shown here—then let your INTERNATIONAL Dealer or Branch give you *all* the reasons why an INTERNATIONAL is your best truck buy.

INTERNATIONAL HARVESTER COMPANY • CHICAGO



NEW increased power, with all-new 201-hp Royal Red Diamond 501 engine standard in new high-power-to-weight 220 Series models.



NEW factory-installed 50-inch one-man cab that permits balanced, 2-side loading of steel, lumber, pipe and other longer-than-truck materials.



PLUS four-wheel-drive models of 11,000 and 15,000 lbs. GVW--built for lowest cost operation in roughest, toughest terrain.



NEW Super Space Saver ROADLINER® conventional truck-tractors that haul all 35-foot trailers in 45-foot limit. GCW ratings, 42,000-65,000 lbs.



PLUS factory-installed, Underwriters approved LPG power, available as optional equipment in 54 models in GVW ratings from 4,200 to 45,000 lbs.



PLUS 10 diesel engines for 30 models. The INTERNATIONAL line of 185 basic models offers widest choice of power—30 engines, gasoline, LPG and diesel.



NEW power steering for all models. New light-duty truck features include tubeless tires, optional automatic transmission and overdrive.



NEW multi-stop models with METRO® bodies—14,000 to 16,000 lbs. GVW. 10 other models—5,400 to 11,000 lbs. GVW—with METRO and METROETTE bodies available with new METRO-Matic transmission.



NEW RF-230 60,000 lbs. GVW six-wheeler added to line of 24 six-wheel models—all with new maintenance reducing, extra rugged rubber-bushed bogie.

International Harvester Builds McCORMICK® Farm Equipment and FARMALL® Tractors...Motor Trucks...Industrial Power...Refrigerators and Freezers

See the season's new TV hit, "The Halls of Ivy," with the Ronald Colmans, Tuesdays, CBS-TV, 8:30 p.m., EST

INTERNATIONAL TRUCKS

Standard of the Highway

INTERNATIONAL OUTLOOK



The West has really grabbed the initiative from Moscow at last.

We now have a policy to counter any moves Moscow may make against the new Western European Union.

It's Atlantic unity—forged at London and Paris—that has put our diplomacy into high gear.

On top of that, Pres. Eisenhower's "atoms-for-peace" plan has gained so much momentum that Moscow is being forced to get on the band wagon.

Premier Mendes-France outlined Western policy this week at the United Nations. He managed to undermine Molotov's whole European game by:

- Refusing flatly the Russian bid for an East-West conference before ratification of WEU.
- Offering a plan for an East-West conference that would come after German rearmament gets under way. This conference would be, in effect, a meeting between the Atlantic alliance and the European Soviet bloc.
- Stipulating that before this conference Moscow should do two things; (1) replace propaganda maneuvers with serious diplomatic negotiations; and (2) agree to sign an Austrian peace treaty.

The French premier made this speech right after intimate talks with Eisenhower and Secy. of State John Foster Dulles.

That doesn't mean the Mendes-France proposals reflect U. S. views in every respect. But Washington sees eye to eye with Paris on this new strategy.

—•—

There is no doubt about Moscow's reaction to the revelation of what Mendes-France really stands for.

You can expect an all-out Communist campaign to destroy Mendes-France as a political figure.

Soviet leaders never forgive a man who outwits them. Mendes-France was supposed to carry France into neutralism and split NATO. That's why he got concessions at Geneva that Molotov would not give to Bidault.

Moscow's opposition to Mendes-France will only increase his standing with Washington. His visit already has convinced the U. S. that he is our best bet in France.

That, in turn, strengthens the premier's position in the French Assembly.

So the chances are that Mendes-France can now get his budget passed and move on successfully to ratification of WEU.

—•—

The Russians seem to be joining in Eisenhower's program to domesticate atomic power for peacetime projects.

World opinion, especially in the underdeveloped countries, is forcing Moscow to go along. That, by itself, is an important victory for the U. S.

But don't expect this to bring the Russians around to our view when it comes to atomic weapons. They will still balk at any international control that includes effective inspection.

—•—

This week's $200-million loan to Brazil (by 19 private U. S. banks)

won't work any fiscal wonders there. It's essentially a refunding operation —putting off the evil day of payment.

The loan—five years at 2¾%—refunds a $160-million short-term credit from the Federal Reserve Bank of New York. It does provide $40-million in addition. But that's precious little in terms of Brazil's commitments, stretched out of shape by the near-disastrous overestimation of 1954 coffee earnings.

Moreover, the loan adds to Brazil's staggering burden of long-term U. S. dollar debt. The total is pressing $1-billion. Next year, for example, interest and principal payments to U. S. financial institutions and the World Bank and International Monetary Fund will be over $125-million.

Even with a stiff dollop of austerity, drastic import cuts, it's hard to see how Brazil can put its dollar accounts in balance next year.

—•—

Brazilians set the tone for the Inter-American Economic Conference, which got under way this week at Petropolis, near Rio de Janeiro.

With his eye on the U. S., conference chairman Eugenio Gudin, Brazilian finance minister, stressed the need for more government loans and investment to speed economic development. And Brazil's Pres. Joao Cafe Filho urged some "daring" new formula for hemisphere economic cooperation.

The U. S. team at Rio (including Secy. of the Treasury Humphrey, Under-Secy. of State Hoover, Presidential economic adviser Gabriel Hauge) has no such daring formula in mind. **Washington insists that private capital must assume the larger share of the development job**—and that Latin Americans must do more to attract the flow of investment dollars.

—•—

The Administration is wrapping up its foreign trade program for presentation to Congress early in January. There will be a single package: the three-year trade agreements bill, customs simplification, tax concessions to foreign investors, ratification of the General Agreement on Tariffs & Trade (GATT).

With the Democrats in control of Congress, Washington observers believe chances are good for positive action. Pres. Eisenhower's program ran into trouble this year largely because protection-minded Republicans headed the key committees on the hill.

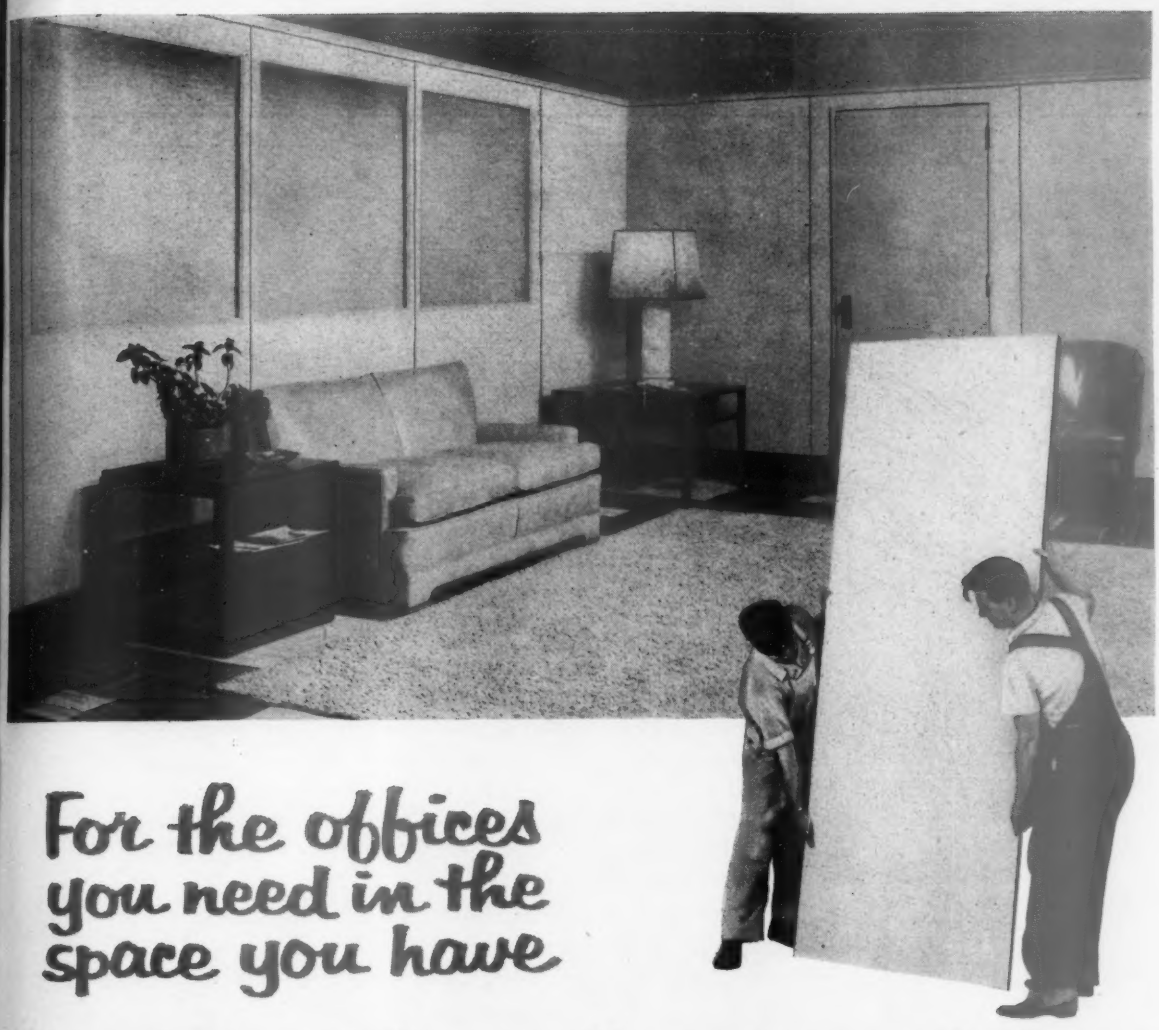
Protectionists will fight hard, nevertheless. They'll try to hamstring the trade agreements act with amendments. They will try to broaden the escape clause, perhaps impose quotas on oil imports, for one.

The White House will have to push the program—and work closely with Democrats—if it's to get any real trade liberalization.

If the Democrats try to make trade a party issue and go far beyond the President's program (for example: trying to knock out the "escape clause" which permits industries injured by imports to get tariff relief) the bill could get bogged down.

There will be continuing pressures from certain industries, too. Last week, the White House decided to drastically cut the "Buy American" price preferences granted U. S. firms bidding on government contracts. Now, the decision is back in the cabinet for review, in response to howls from affected manufacturers.

Contents copyrighted under the general copyright on the Nov. 27, 1954, issue—Business Week, 330 W. 42nd St., New York, N. Y.



For the offices you need in the space you have

J-M Class A Asbestos Walls are movable . . . save space and make space . . . are noncombustible, lower priced . . . come in pleasing colors

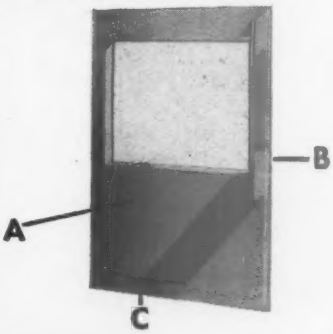
New Johns-Manville Class A Movable Walls offer you advantages never before combined in an asbestos movable wall. They are modestly priced. They are noncombustible. They have a textured, stipple finish in restful colors. They reduce maintenance and relocation costs to a new low.

The finish of Class A Movable Walls is a tough, hard film many times thicker than on the usual movable partition. It is mar and scratch resistant . . . rejects stain and soil . . . can be easily washed and even scrubbed, if necessary. If damaged, it can be touched up inexpensively to look like new . . . and, unlike other types of factory-finished partitions, can be repainted with ordinary paint.

Undivided responsibility for a complete job

Class A partitions are not only furnished, but also erected by Johns-Manville's own Construction Department, complete with doors, door hardware, glass and trim.

An estimate will convince you that the cost of J-M Movable Walls compares favorably with other types of wall construction. For details, write Johns-Manville, Department BW, Box 158, New York 16, N. Y. In Canada write 199 Bay Street, Toronto 1, Ontario.

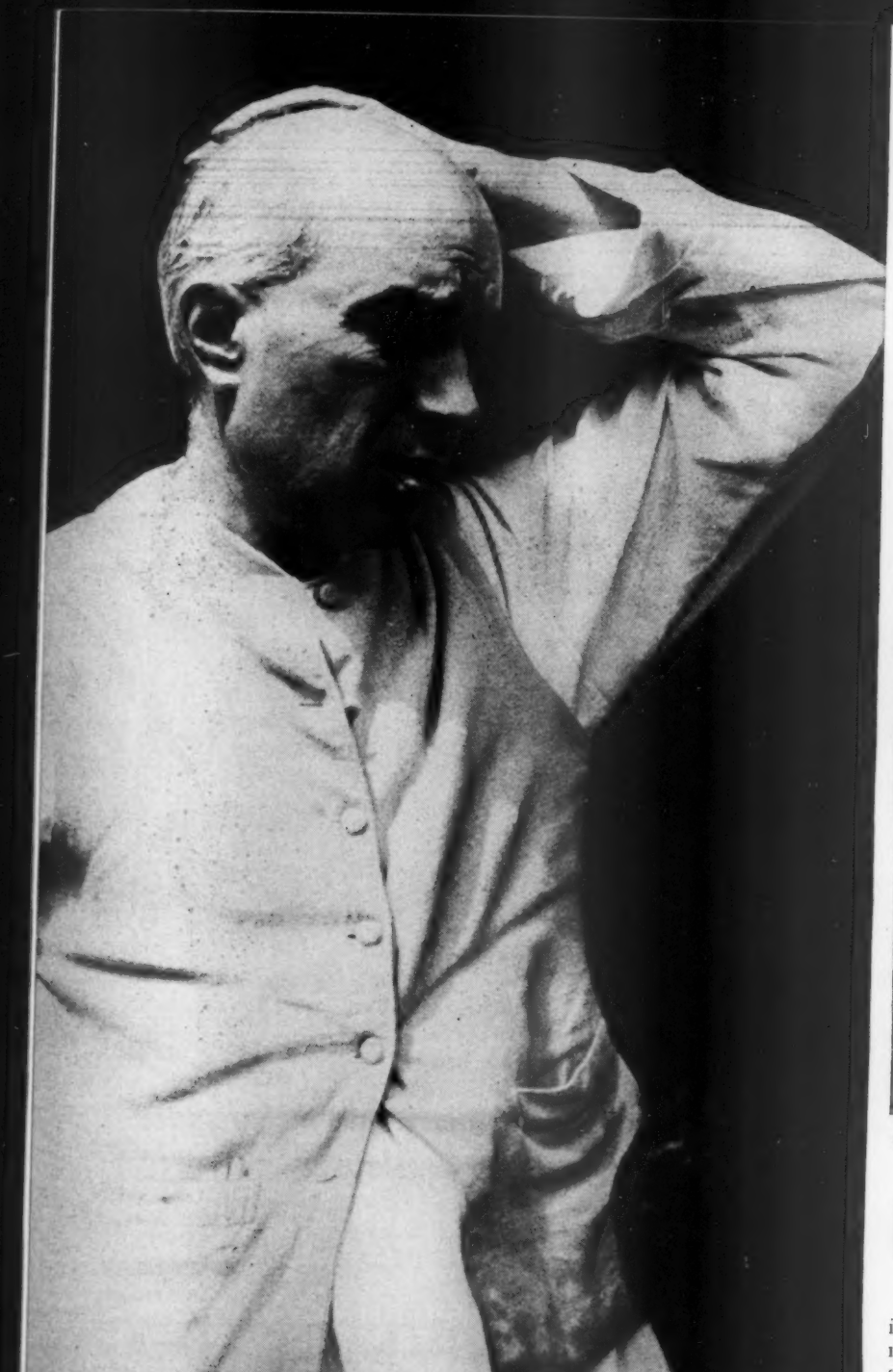


A Noncombustible asbestos-cement surfaces

B Generous reinforcing for added strength

C Noncombustible all-mineral insulating core

JOHNS-MANVILLE JM PRODUCTS **Johns-Manville**





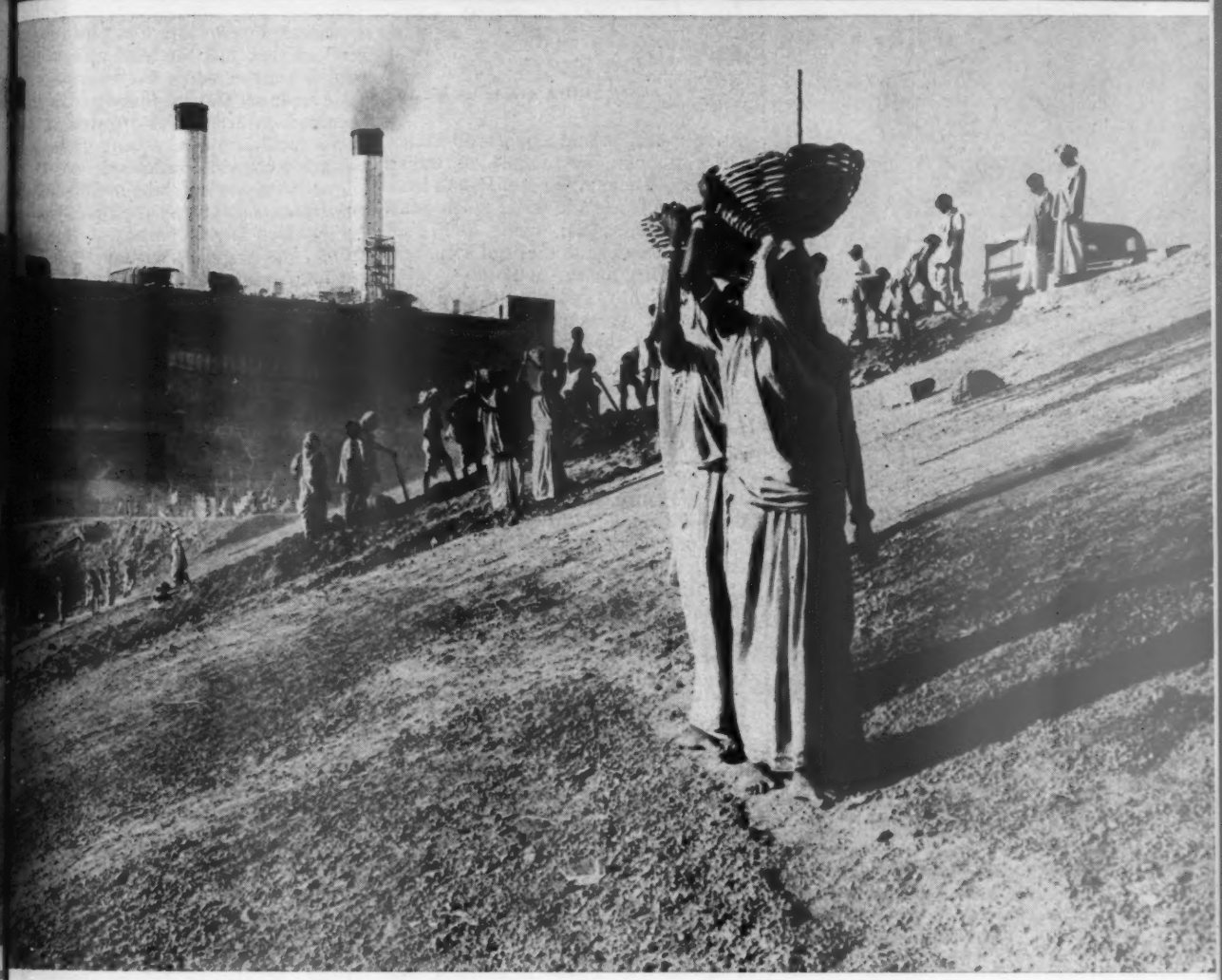
SYMBOL of India is Prime Minister Ne

India, Shor

Jawaharlal Nehru, India's Prime Minister (picture at left), is a man with a mission in life, in fact a twofold mission: to prove that India's misery and poverty can be licked without sacrificing freedom, and to prove that peace is possible between the world's two power blocks.

This is an all-important fact in India, and a fact of no mean importance in world affairs. For Nehru dominates the life of his country as no national leader in the postwar period, except perhaps Stalin in Russia. Furthermore, his name and policies are a rallying point for all of South Asia. That was why his recent trip to Red China (BW—Nov.6'54,p 139) was a matter of such concern to the West.

• Hopes and Dangers—Nehru's India



ft), and symbol of its need is power plant above. Without foreign funds, India can't keep up in race with Red China, so . . .

of Goals, Warms to U.S. Capital

is as much a democracy as Asia has known. In the vast area between Hanoi and Cairo, it is the only country (with the exception of Burma, island Ceylon and tiny Israel) with a popularly elected government. If India—the most populous, the largest, the most powerful Asian nation with the exception of China—can hang on to freedom, there is hope for all South Asia.

But as yet there is no solid base for democracy in India. The country still is faced with poverty, land hunger, and unemployment. Nehru knows this, and knows that only industralization will raise India's living standards so that this threat may be averted.

• **Falling Short**—Since August, 1947, when the subcontinent was partitioned between India and Pakistan, Nehru has known he faced a long haul. He has based his dream of a prosperous India on long-term planning. This began in 1950 with the inauguration of the First Five-Year Plan, a first step on the road toward reconstruction, which was to be followed by the Second Five-Year Plan now being drafted.

It is clear now that the First Five-Year Plan will fall way short of its goals. It has failed even to get India started on the kind of industrial revolution that must come if the country is to cope with its growing population.

• **Food Crisis**—One reason is that India's leaders concentrated on agriculture in the First Five-Year Plan (BW—Apr.24'54,p124). They had no choice. India suffered two disastrous crop failures in 1950-51 and 1951-52. With the aid of a $190-million U. S. wheat loan and heavy food imports, famine was averted.

Today India's food position is a great deal better. With the help of two good monsoon (rain) years, India has built large reserves of food grains. There have been 2-million additional acres put under the plow, and 8.1-million acres of farmland have been put under irrigation. It seems likely that the Plan's target of 60-million tons of food grains will be met this year, 1½ years ahead of schedule.

• **Land Hunger**—Even so, India's food problem is far from licked. The margin still is so small that two bad harvests would bring on a new crisis. And that threat can't be removed until the Nehru government makes inroads into the ex-



Stop packaging losses with Thilco Paper Imagineering

Rigid cost control of your packaging by adopting Thilco wrapping papers and methods best suited to your requirements eliminate costly waste—provide better protection.

EXAMPLE: A large bearing manufacturer changed from a plain heavy kraft wrap to a 50% lighter weight Thilco Print-Decorated, stretchy, creped kraft. Result: Better protection, faster wrapping, a "selling" package — and greatly reduced cost.

- Hygroscopic materials such as lime and cement are now packaged in Thilco moisture-proof multi-wall bags. Cost is much less than other containers and Thilco Print-Decorating gives them a plus sales value.
- Battery manufacturers use Thilco super calendered kraft, laminated with polyethylene for making battery tubes more powerful. Cost is less and thinness of stock permits increased capacity of dry cell.

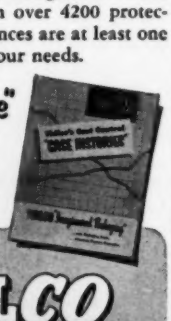
Many companies are now making cost control examinations of their packaging and working out better methods with the help of Thilco. Big savings, or distinct improvements without additional cost usually result.

Turn YOUR Packaging Losses Into Profits with Thilco paper "Imagineering"

Take advantage of the improvements and technical advances being constantly made by Thilco packaging research. Tell us your problem and let Thilco "Imagineers" work it out. Our files contain over 4200 protective paper samples. Chances are at least one or more could also fit your needs.

Get this "Fact File"

It tells of savings made by companies such as yours. Write on your company letterhead today — and put some of these cost control ideas to work for you.



THILCO
Functional Papers
THILMANY PULP & PAPER COMPANY
KAUKAUNA • WISCONSIN

NEW YORK • CHICAGO • DETROIT • MINNEAPOLIS • CINCINNATI

"...targets the planners set for themselves were conservative..."

INDIA starts on p. 142

isting system of land tenure—subsistence share cropping by millions of India's villagers. These millions of India's landless peasants are idle for as much as six months of the year, trying to live off the pittance of grain they can keep from what is raised for the landlord.

The Nehru government has succeeded in breaking up some large estates. But the heart of the problem lies in the millions of medium-sized plots owned by smaller landlords. Expropriation with compensation would be a tremendous burden for the government. Some Indians put a great deal of hope in the nongovernment movement led by Vinoba Bhave, a 65-year-old disciple of Gandhi. Bhave has been walking from village to village pleading with landlords to give land to the landless. In three years, and after 10,000 miles of walking, he has distributed 3½-million acres—still a fraction of the land needed to solve the problem.

• **Industrial Bogs**—It's on the industrial front that the Five-Year Plan has really bogged down. Investments in manufacturing have not come anywhere near the targets. The concentration on agricultural production has increased industrial unemployment. While no solid figures are available, it is generally estimated at half a million out of an industrial work force of 4-million. Unemployment hits particularly the educated Indians—many of them young students, trained in liberal arts colleges. These become a gold mine for Communist agitation.

As it was, the targets the planners had set themselves were conservative. Indian economists estimated that in 1950 India was saving and reinvesting between 4% and 5% of the national income. But with 4½-million new mouths to feed a year, 3-million to 4-million new workers, this rate of reinvestment isn't enough to maintain present living standards. The Plan set out to reach a 6% to 8% rate by 1956, taking this as the critical point for maintaining present living standards. It is now clear that the goal will not be reached.

To put it in more concrete terms, the Plan aimed at investment of $7-billion through the central government, the state governments, and private enterprise. Only 80% of this amount will be spent by May, 1956, the Plan's deadline.

The central government has kept up with major hydroelectric and irrigation developments, some of them completed ahead of schedule. But the state governments, hampered by lack of trained administrative help, have fallen behind.

Private investors have put into industry less than half the $489-million that was scheduled under the Plan.

• **American Capital**—Foreign capital, counted on heavily for investment, has been conspicuously absent from the Indian scene since independence. U.S. firms have put only about $60-million into independent India, $50-million of it into two large refineries at Bombay. (One, the Standard-Vacuum Oil Co.'s $32-million refinery, was opened this week.) British capital has moved into the country in greater amounts, and British-owned industries in India are reinvesting earnings, but still not at figures envisaged by the Plan.

U.S. investors have looked the other way when India offered investment possibilities, mainly because there were better opportunities at home, in Canada, and in Latin America. But their neglect was also the result of the unfriendly atmosphere toward foreign investors that developed in post-independence India.

Two North American firms, General Motors and Ford of Canada, closed down their assembly plants and pulled out when they were faced with demands for local manufacture of an auto, rather than just local assembly. Indian legislation—investment and labor laws—also discouraged new investors.

• **Change**—That attitude now seems to be changing. Nehru continues to make speeches assuring Indians that their government is headed toward "socialism." But Nehru's socialism leaves plenty of room for private enterprise and foreign capital. Less than a year ago, the House of the People (India's House of Representatives) passed a resolution boosting free enterprise. The Planning Commission has gone on record against a constitutional amendment increasing the likelihood of nationalization.

Sir Chintaman Deshmukh, India's finance minister, reinforced this changed attitude when he visited in U.S. financial circles after a meeting of the International Monetary Fund in Washington recently (BW—Oct.2'54, p27). Deshmuhk has followed a conservative fiscal policy, keeping deficit financing of the present budget to less than 15%. He has played along with the British Treasury, not pressing London for the $1.8-billion in sterling owed India for wartime debts.

Indian government leaders cooperated in recent negotiations setting up the Indian Development Finance Corp. (BW—Oct.9'54,p163). With U.S., British, and Indian private capital, and World Bank and Indian government funds, the IDFC hopes to push medium-sized manufacturing projects.

Indian businessmen are trying to convince their American counterparts that there are great opportunities in India. B. M. Birla, a member of the wealthy Indian industrial family, is now trying to sell American investors on a $250-million steel mill he hopes to build.

India has vast high-grade iron ore deposits and could use, according to the planners, six-million tons of steel by 1960. It only produces about 1.4-million tons now.

• **Alternatives**—The Russians have offered good terms for one mill (BW—Oct.2'54,p150). Whether the Indians take up this offer or turn to private financing in the West could be a strong indication of just how far Nehru will go to encourage private investment from abroad. There's considerable evidence that he is now ready to go along with more conservative members of his government in encouraging foreign investment.

Without foreign capital, it will be impossible for India to keep up in the race with Communist China. And despite the fact that Nehru says publicly there is no race, every sign points to one.

In his speeches and conversations since his return to India, he has reiterated his strong impressions of Chinese discipline and industry. It's something every visitor to Red China has been struck with. But he also has been reinforced in his views that China's Communist way is not India's.

Foreign capital is the only alternative India has to China's forced savings and forced labor. If Nehru is not willing to accept it, India will have to give up the race or abandon its free society.

• **Sticking to Role**—But if Nehru's China trip has brought him to new decisions about India's economy, it did not change India's fundamental approach to foreign policy. Nehru refused when he went to Peking to buy the Chinese Reds' "peace bloc," just as he had earlier refused to participate in the South East Asia Defense Organization Treaty, which the United States sponsored.

Nehru believes blocs lead only to war. By remaining outside the two world blocs, Nehru believes India can be the mediator between them. This view is supported by India's basic difference with the Communist powers' point of view, and its smaller differences with the West.

But Nehru cannot play this role in world affairs unless India can remain free and push forward on the road to better economic conditions. That explains the urgency that is felt in New Delhi as Indian planners set about the task of working out a Second Five-Year Plan.



A Red Hot Proposition

Buell offers you a unique opportunity to recover valuable dust from your industrial stack—with results proved in advance, before you spend a single cent!

Many of America's Leading Corporations have already taken us up on this 'hot proposition'. Why don't you?

Simply call in a Buell Engineer. First, he'll analyze dust samples from your stack, then make a thorough study of operating conditions. Finally, he will recommend the best Buell equipment to handle *your* particular job.

Because of many variables, each job is different. Buell equipment can handle *any* problem. The famous Buell 'SF' Electric Precipitator, for example, has amazed engineers by its ability to efficiently collect so many different materials. *The efficiency and economy* of the Buell Cyclone has consistently set records. We invite you to check daily operating records kept by our customers . . . and judge for yourself!

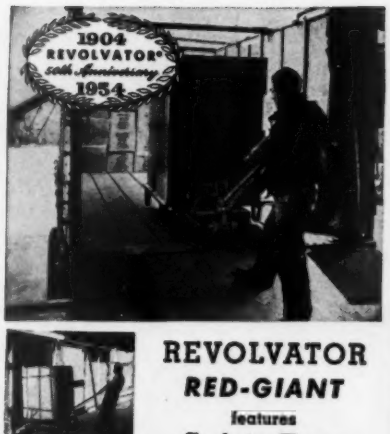
Get the complete facts about *all three* Buell systems described in our brochure—The Collection and Recovery of Industrial Dusts. Write Dept. 30-K, Buell Engineering Company, 70 Pine Street, N. Y. 5, N. Y.

buell®

MECHANICAL ELECTRICAL

20 Years of Engineered Efficiency in

DUST RECOVERY SYSTEMS





REVOLVATOR
RED-GIANT
features
Safety-Ease

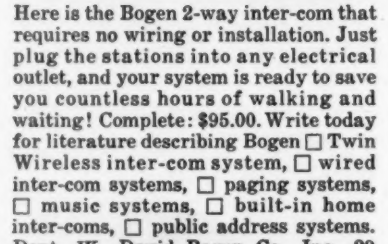


Durability — built in by 50 years of Revolvator Co. experience—is still the fundamental of the Red Giant liftruck line. Maneuverability, plus the safety of their exclusive double stroke mechanism, make the models shown leaders in their fields. There is a Red Giant liftruck available for every use—for every capacity.



Write for the full facts today.

REVOLVATOR CO.
8711 Tonnele Ave. North Bergen, N. J.



PLUG IT IN AND TALK!

Here is the Bogen 2-way inter-com that requires no wiring or installation. Just plug the stations into any electrical outlet, and your system is ready to save you countless hours of walking and waiting! Complete: $95.00. Write today for literature describing Bogen ☐ Twin Wireless inter-com system, ☐ wired inter-com systems, ☐ paging systems, ☐ music systems, ☐ built-in home inter-coms, ☐ public address systems. Dept. IK, David Bogen Co., Inc., 29 Ninth Ave., N. Y. 14.



Bogen
TWIN
WIRELESS
INTER-COM



PRESIDENT CASTILLO (center) tries to tell American newsmen how . . .

Guatemala Maps Its Course

Guatemala is groping today—but with high hopes and a good deal of confidence.

The hopes rest about equally on financial help from Uncle Sam, on the American tourist, and on coffee revenues. The confidence stems in no small part from the show of stability by the new regime of President Carlos Castillo Armas, which routed the Communists from their first government in the Americas.

The country suspected, even before Castillo's June revolution, that the treasury had been cleaned out. Everyone knew the economy was being choked as investment dried up and capital fled the country. Everyone knew, too, that the debt had been mounting perilously toward the end of the time that the pro-Communist Arbenz government was in power.

• **Large Debt**—One thing that wasn't known until last week was the size of the debt left by the Communists for the new government to shoulder: $53-million, up about 150% in less than two years. (Officially, the debt was $41-million last June, up from $21-million in a year and a half; the jump up to $53-million since then came from claims left unpaid by the Communists and presented for payment since the revolution.)

If these figures sound tiny, remember Guatemala is a small country. Its total area is about that of Louisiana or New York State—and close to half of it is virtually impenetrable and uninhabited jungle. The people number only a little more than 3½-million (predominantly Indians), and reliable estimates place the tilled acreage at less than one acre per person. Total exports in 1953, mainly coffee and bananas, were only $89-million.

Today's most pressing problems, heavily financial, weigh most on the recently appointed finance minister, Jorge Echeverria. He has the worry of the debt and of eking out current revenues from emergency taxes. He must revamp the tax structure before the next fiscal year starts, and he is striving to lop several millions off the $69-million Arbenz budget for the current year, which ends next June 30.

Echeverria, 56, is the oldest member of the government. (Castillo, himself, is 40; most of those around him are in their late thirties and early forties. Echeverria also has more political experience than most, and enjoys a reputation for integrity among U.S. businessmen who know him.

• **New Taxes**—His tax program unquestionably will center around Guatemala's first income tax. Personal rates and exemptions still are very much up in the air, but a corporate impost of 30% is freely discussed. Still others hope there will be more than a token levy on real estate. The contention is that money goes into land where it feels taxation hardly at all; much of the land lies idle, causing the resentment of the underprivileged on which the Communists capitalized in their land seizure and abortive redistribution. The assumption is that the new taxes will do away with the present emergency levies most of which are restrictive on private in-

vestment and enterprise—$3 a cwt. on export of coffee, in addition to the existing high graduated levy; 1% on all assets; 3 mills on all real property in addition to the existing impost of the same amount; $2 a cwt. on cotton exports; one day's wages on salaries for those earning over $100 a month and 10% of an average month's income for all professional people, to name a few.

Plans for revivifying the economy for the long pull are a dime a dozen in Guatemala now. Few, however, have yet received an official blessing—although the feeling in Guatemala City and in Washington is that any responsible project is almost assured of U.S. aid to counter the Reds, if for no other reason.

• **Major Aim**—First priority is for highways. The previous two regimes, particularly the Arbenz government, poured millions into the woefully inadequate roads. But most of it took wings—misspent or, perhaps as many insist, stolen and misapplied to Communist tutelage. Most of what was undertaken has to be done over, save for one sound strip of paving on the Inter-American Highway.

Top project now is completion of the Inter-American Highway to the Mexican border. (The U.S. puts up $2 for Guatemala's $1 on this.) There is talk of trucking out produce over this road that crawls along the sky-high backbone of the continent, but its most immediate lure is to bring in the Yankee tourist.

Second is the Pacific Highway, more or less paralleling the Inter-American but close to the ocean, which would open up what is generally considered the country's most valuable areas for general agriculture. (Coffee, the big money crop, is raised mostly at higher altitudes.)

Third would be the highway running northeast from Guatemala City to the Atlantic. This parallels the U.S.-owned International Railway of Central America's narrow-gauge line, and was started by the previous regime with the announced intention of putting the railroad out of business. (A new Atlantic port at Santo Tomas already is nearly complete, awaiting arrival of the highway to feed in traffic. This was designed to put Puerto Barrios, where United Fruit Co. owns the piers, out of business.)

Finally, there is the Northern Highway. It now is scarcely more than a tortuous track, and not even that after it descends from the highlands into the jungle. But it would tap vast hardwood forests—and the area suspected of harboring petroleum, and possibly metals.

• **Black Gold**—Guatemala has oil fever, has had for years. Shell, Sohio, and Atlantic Refining all had done exploration before the Arbenz government canceled their concessions. Now represented in Guatemala City, awaiting a decision on new concessions, are Atlantic Refining, Richfield, Esso, Texaco, Union, Phillips, Ohio Oil, and others.

Aside from the probability of a helping hand from Uncle Sam and the possibility of oil, Guatemala's chief immediate advantages are a strong currency and its tourist drawing cards. Less tangible, but of great importance, is the hoard of $50-million or more that has fled the country (mainly coffee receipts that were left in the United States).

The currency unit, (the quetzal, named after the national bird) was printed at a dizzy rate in the late months of Communist spending. However, coffee prices were going up, too. And the Arbenz regime was loath to touch the national gold hoard in New York.

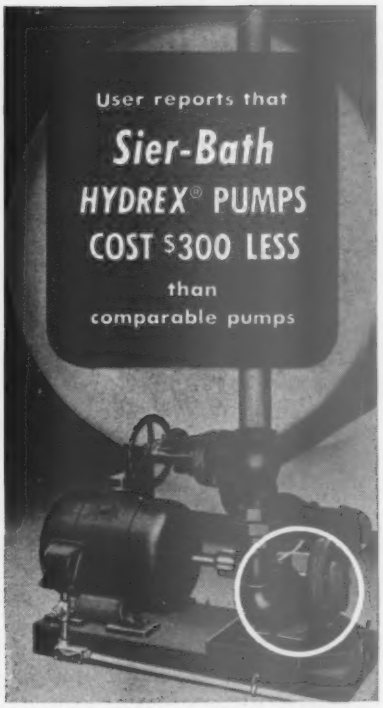
The result is a circulating medium of some $85-million (of which $55-million is currency and the rest bank deposits) backed by more than $40-million in gold. A favorable trade balance, even during the flight of capital, worked with the gold reserve to keep the currency strong. The quetzal long has been worth a dollar (which makes exchange easy for visitors as well as foreign traders) and there are no restrictions on movement of money into or out of the country.

• **Tourism**—Tourist attractions include the equable climate at higher altitudes during the dry season (our winter months), which has won Guatemala the praise of The Land of Perpetual Spring, picturesque lakes and volcanoes of which a few are still active, inexpensive hotel and tour accommodations, native crafts, quaint Indian customs and costumes, and a friendliness toward visitors.

Members of the Castillo government talk of greatly increased tourist revenues as one means of adding to dollar revenues. The flow was down to $1¼-million last year and doubtless fell to little or nothing in the last months before Arbenz was overthrown. The country feels that even the $2¼-million taken in during 1948 is only a fraction of the potential.

A complete revival of American tourism and trade doubtless depends on the treatment of U.S. capital already in Guatemala. A tipoff may be the treatment of the United Fruit Co., which had some 385,000 acres of land confiscated by the previous government.

There is no certainty that the big banana company will get all its lands back. In fact, there's no certainty that U. F. cares—so long as it gets back the acreage it prizes most for future operations. An informed guess is that the company would settle for the return of its best holdings on the Atlantic side, and would gradually restore its once big



Cosden Paint Co., Beverly, N. J., custom paint manufacturer, uses Sier-Bath "Hydrex" to pump 15,000 SSU resin from storage to plant at 1150 RPM.

Cosden reports that their "Hydrex" Pump cost about $300.00 less than comparable pumps . . . does a very good job of pumping . . . has less parts, fewer lubricating points, and requires less space.



***Simplest* heavy duty gear pump made!**

The "Hydrex" needs no costly speed reducer—can be direct-connected up to 1800 rpm. Extreme simplicity allows heavier construction, easier installation and maintenance, less down-time, longer life.

Use the "Hydrex" to cut costs pumping chemicals, fuel oils, lube oils, hydraulic liquids, etc.—from 32 SSU to 250,000 SSU, 1 to 350 gpm, up to 500 psi. For further information, write to *Sier-Bath Gear & Pump Co., Inc., 9258 Hudson Blvd., North Bergen, New Jersey.*

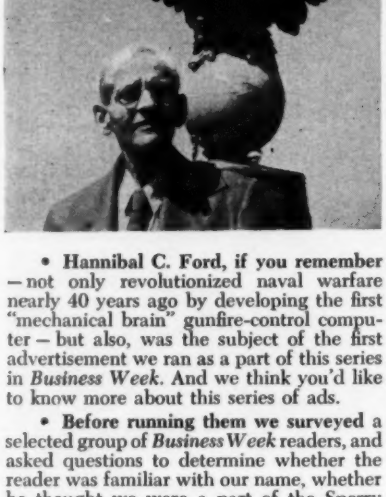
Sier-Bath ROTARY PUMPS

Screw Pumps
"Gearex" Pumps
"Hydrex" Pumps

See them at the POWER SHOW, BOOTH 309

Mfrs. of Precision Gears, Rotary Pumps, Flexible Gear Couplings
Founded 1905 **Member A.G.M.A.**

Remember Hannibal C. Ford?



• **Hannibal C. Ford, if you remember** – not only revolutionized naval warfare nearly 40 years ago by developing the first "mechanical brain" gunfire-control computer – but also, was the subject of the first advertisement we ran as a part of this series in *Business Week*. And we think you'd like to know more about this series of ads.

• **Before running them we surveyed** a selected group of *Business Week* readers, and asked questions to determine whether the reader was familiar with our name, whether he thought we were a part of the Sperry Corporation, which we are, or whether we were part of an equally prominent motor car manufacturer with a name like ours, which we are not. Further, we asked the *Business Week* reader whether he could name some of the products we make such as: resolvers, servo mechanisms, weapons systems, missile guidance systems, analog computers.

• **Results were quite interesting.** These actually determined just what our program in *Business Week* should be like – it gave us a clue about what you need know about Ford Instrument Company to associate us correctly in your minds as pioneers in automation since 1915.

• **Twelve ads later,** we hope you fully appreciate the fact that Ford's facilities and capabilities are available to you for engineering counsel, the manufacture of controls and devices for industrial uses, and any other requirement our skills can handle. We hope you know that our floor space covers more than 700,000 square feet and that we employ 3000 engineers, designers, production personnel . . . men and women dedicated to *quality* production.

• **Recently we resubmitted the same questionnaire** to the same readers and found that while we still have much advertising to do, our company recognition has increased . . . a year later representing a 60% increase in proper association of our identity and our products. We think this is a credit to your interest in the products and services Ford Instrument Company offers. If you would like a complete story about Ford, why not drop us a line requesting our fully illustrated booklet.

37

FORD INSTRUMENT COMPANY

DIVISION OF THE SPERRY CORPORATION

31-10 Thomson Ave., Long Island City 1, N. Y.

operations in that area which has certain advantages over its present plantings on the Pacific coast.

Another tip on this government's friendliness will come on its treatment of new foreign investments. The only official statement so far is that money from outside is welcome "as long as it obeys our laws." This is probably insufficient assurance after events of recent years. Nevertheless, a trickle of American money already is going into mortgages.

Guatemalan money that has taken refuge abroad still shows no tendency to come home, pending a more complete revelation of the Castillo government's complexion and plans.

• **Playing Safe—So** far, the government has been middle-of-the-road. No labor legislation of the previous regime has been repealed or amended. And, while all the country's 530 labor unions were disbanded pending removal of Red leadership, some 15 had been re-recognized by last week. Most of the Communist leaders have fled the country or gone underground, and the government claims to hold only about 100 political prisoners.

Much is made of public housing and development of hydroelectric resources (partly for propaganda on the home front). There is a drive, too, for freer credit for the small landowner and for a genuine redistribution of land—not as a "gift" as the Communists had promised, but on easy purchase terms.

But the middle-of-the-road in Guatemala is a difficult trail. There are, and will continue to be, strong pressures for a government of the far right, even for the kind of military dictatorship that was overthrown in 1946. The small feudal group that ruled so long fears what might happen if the dominantly Indian population, illiterate and exploited for four centuries, should ever take charge. It saw amid the social and political pressures whipped up by the Communists what it believes is a dark portent of the future. Castillo will have to be surefooted, lest in eradicating Communism he lean too far toward reaction.

The Pictures—American Machine & Foundry—92; Associated Photographers—86, 87, 90; Joe Clark—58; Henry G. Compton—112; Walter Curtin—166, 167, 169; Ferro Corp.—102; General Electric Co.—94; Int'l General Electric Co.—142 (rt.); Herb Kratovil—25, 68, 69, 72, 74, 153; N. Y. Herald Tribune by James Kavallines—156; Pan-American Airways—146; Pix, Inc.—142 (lt.); United Press 10, 52; Wide World—32.

Export Aid

Chase Bank brainchild will advance credit to U.S. producers . . . Ex-Im's plan is rolling along.

Last week, Chase National Bank of the City of New York formally unveiled a scheme to help U.S. producers of heavy machinery and equipment finance their sales abroad.

Chase will organize a new corporation to supply export credit, and expects to go soon to the Federal Reserve Board for a charter (BW—Oct.16'54, p164).

Once set up, the company will buy foreign importers' notes from U.S. exporters for a maximum term of five years and a minimum of six months. The exporter will share part of the risk, both as shareholder of the new corporation and as participant in each separate financing deal. The Export-Import Bank is tied in, too, and will pick up 25% of the importer's liability when the notes are purchased by the corporation.

The exporter must show that he has had a cash-down payment from an overseas customer—about 20%—before he can sell the note. And only those goods that tend to "improve and develop" the company of the importing nation will be eligible.

That means mine, transport, farm, industrial machinery, and iron, steel, and nonferrous metals for use in development projects. Consumer goods, says Chase, are out—at least for the time being.

●

The Export-Import Bank's own export-credit plan is swinging into high gear. Two more big exporters received lines of credit this week.

Ex-Im's plan involves opening general, virtually automatic lines of credit for selected exporters of capital goods (BW—Oct.9'53,p156). When a specific deal comes up, Ex-Im guarantees payment of the foreign importer's note, less a specified down payment and a percentage of the total—around 20%—which must be assumed by the exporter himself. With Ex-Im's guarantee, private commercial banks are expected to step in and take over the note.

The first two lines of credit went to Oliver Corp. (farm machinery) and Combustion Engineering, Inc. (steam boilers)—$4-million and $6-million, respectively.

This week, Ex-Im announced that two more companies would receive lines of credit. LeTourneau-Westinghouse Co. received $3-million to use in financ-

ing exports of its earthmoving equipment. And Worthington Corp., of Harrison, N. J.—maker of steam and internal-combustion power plants, construction and hydraulic equipment—is down for $4-million.

BUSINESS ABROAD BRIEFS

Enter the Italians: Venezuela is filling up with Italians, so many that one leading Caracas newspaper is printing a page in Italian. There's already one completely Italian daily and an Italian language radio station. . . . Montecatini, the Italian chemical combine, will put up a fertilizer plant in Colombia. . . . Milan's SNIA Viscosa is building a $20-million cellulose plant in Mexico. Backed by Italian and Mexican investors, the plant will supply 100% of Mexico's market needs—and maybe even some for export.

•

Antwerp's port will benefit from reductions in hauling charges effective Jan. 1. The Belgian Maritime Federation has scaled down transshipment fees and stevedore charges by 5% to 16%.

•

Political football: Finland is having difficulties with the Russians over oil. The Finns want to build a refinery to save foreign exchange. Since Russia supplies 93% of Finland's oil products, it would feel the effects sharply. Finnish Communists call the government's plan for the refinery an anti-Soviet plot.

•

A Dutch insurance company, the Holland Life Insurance Society, is setting up shop in Canada. The nation's 100,000 or more Dutch immigrants (page 166) should give the company a good start.

•

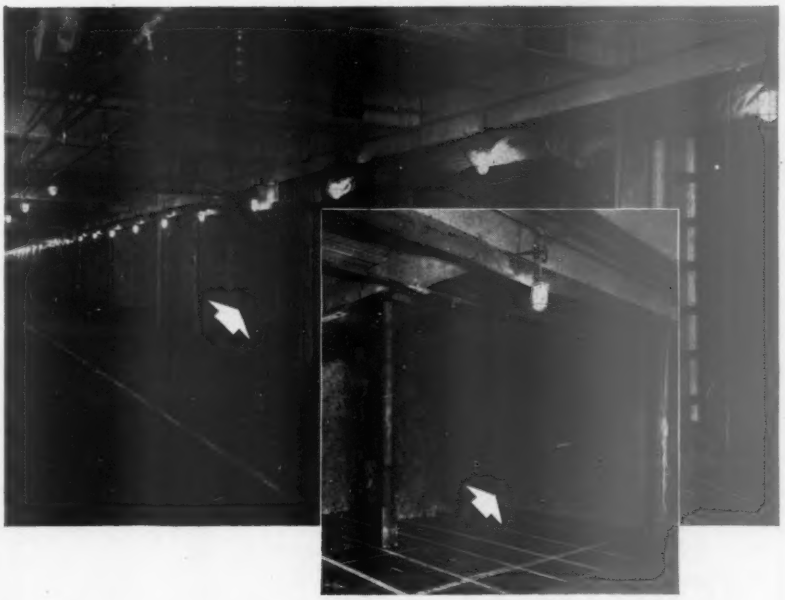
Norway builds more houses per capita than any other European country. Latest figures are 10.5 houses per 1,000 persons during 1953, or a total of more than 35,000.

•

No mirage: The Sahara desert is opening up. Air France is extending its operations with 10 new routes across the sands, pointing up the industrial development of the region. . . . Meanwhile, to the south, two French aluminum companies and the French government have set up the Cie. Camerounaise d'Aluminium Pechiney-Ugine. It will build a $5.6-million project in French Equatorial Africa to mine and produce aluminum. When it starts going in 1957, it will boost French aluminum production by a third.

ASBESTOS PRODUCTS

K&M best in asbestos



65,000 square feet of sidewalls of wool bins are faced with ¼" thick Linabestos sheets in the Bigelow-Sanford Carpet Company's plant in Thompsonville, Connecticut, a portion of which you see here.

Where strong, fire-resistant walls are needed choose K&M "CENTURY" Asbestos-Cement Sheets

There's sound reason why Bigelow-Sanford Carpet Company used K&M's "Century" Linabestos. And the need for strong, fire-resistant walls was a chief determining factor.

"Century" Linabestos offers other important advantages . . . permanent protection against attacks by rats, termites and destructive insects.

K&M makes two other kinds of flat asbestos-cement sheets . . . "Century" Apac and "Century" Sheetflextos. Apac is known for its low cost and remarkable adaptability while Sheetflextos, with flexibility as a chief characteristic, is used primarily on interiors. For full information on all three of these outstanding flat asbestos-cement sheets, write today.

Nature made asbestos . . . Keasbey & Mattison has made it serve mankind since 1873

KEASBEY & MATTISON COMPANY

AMBLER • PENNSYLVANIA

In Canada: Atlas Asbestos Co., Ltd., Montreal, Toronto, Winnipeg, Vancouver

K&M best in asbestos

NEW RECORDER
NO WIRES OR PLUGS

Now with Walkie-Recordall, the amazing 8-lb. recorder-transcriber, you can make automatic, undetected recordings in or out of closed briefcase including self-contained mike. No wires or plugs. Walkie-Recordall, world's only recorder of its kind, operates from self-contained standard dry batteries. Picks up within a 60 ft. radius. Records continuously for 4 hours. Voice-activated "self-start-stop" control eliminates supervision as well as the recording of silent periods. Walkie-Recordall is ever-ready for recording in office, car, train, plane, boat. Perfect for on-the-spot recordings of conferences, lectures, interviews, sales-training, reports, investigation, dictation, 2-way phone. Recordings on compact, easy-to-file endless film belt are permanent, unalterable, indexed and cost only 3c per hour.

SOLD DIRECT ONLY — NO DEALERS

MILES REPRODUCER COMPANY, INC., Dept. BW
812 Broadway, NewYork 7, N.Y., SPring 7-7670

TREASURERS
COMPTROLLERS
SALES MANAGERS

Travel expenses can be reimbursed efficiently and without cash advances! TRAVELETTERS have been used for 60 years by thousands of outstanding companies, because TRAVELETTERS

- V eliminate expense checks
- V improve expense control
- V lessen internal costs
- V reduce travel expenses
- V increase productive time
- V minimize cash advances

For information write:

TRAVELETTER

Traveletter Corp., Greenwich, Conn.

SUS-RAP

NEW way to ship
GLASS and FRAGILE PRODUCTS
Safely... Economically!

PRE-FORMED PACKAGING provides complete IN-CARTON suspension . . . fits contour of individual item. Made in easy-to-use rolls and precut lengths and widths.

SUS-RAP is used by many of America's largest manufacturers to ship:

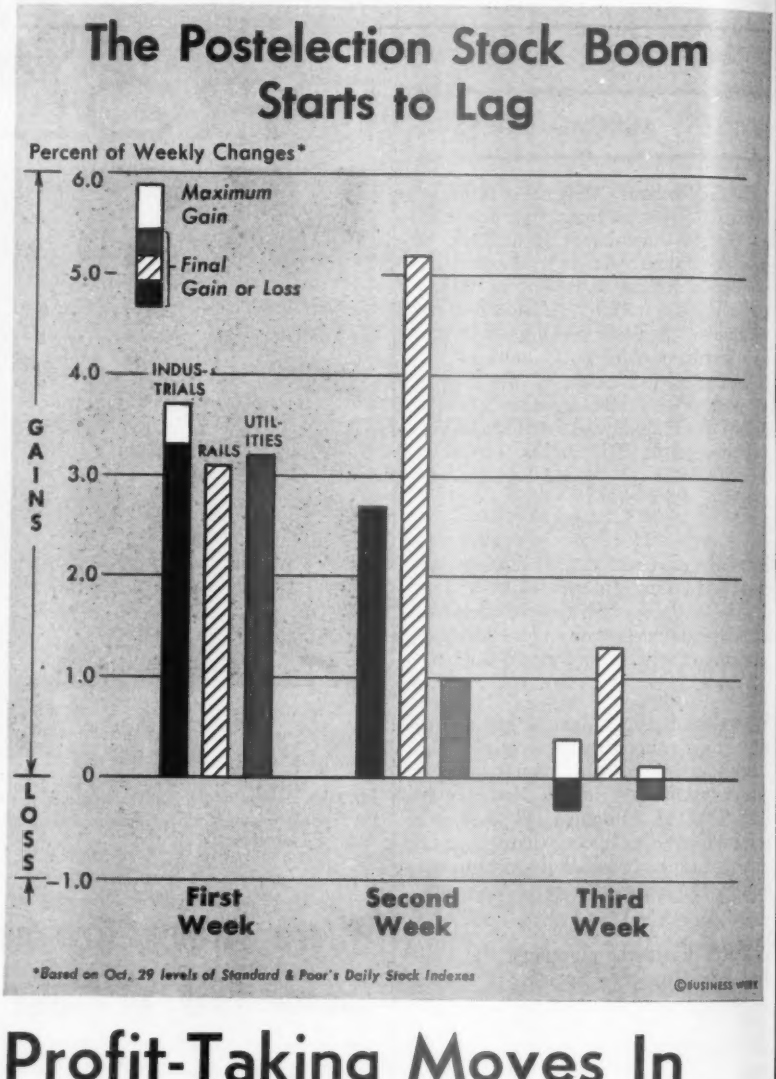
AUTOMOBILE WINDSHIELDS • MIRRORS • CLOCKS • NEON and PLASTIC SIGNS • GLASS REFRIGERATION SHELVES • MARBLE SLABS • STOVE TOPS • PORCELANIZED PANELS • TV WINDOWS • HOLLOWARE •

SUS-RAP is engineered to your requirements.

For Complete Information MAIL COUPON TODAY!

VANANT CO., Inc. 1983 S. Allis St., Milwaukee 7, Wis.
Gentlemen:
We want to know more about SUS-RAP.
( ) Send literature ( ) Have representative call
Name_____
Company_____
Address_____
City_____ State_____
VANANT COMPANY INC. 1983 S. ALLIS ST. MILWAUKEE 7, WIS.

THE MARKETS



Profit-Taking Moves In

Profit-taking has finally clamped a brake on the stock market; the dizzy post-election price climb has been slowed materially, and in many cases halted (chart above).

Still, the slowing down has not alarmed the bulls of Wall Street. Even the cautious segments of opinion are inclined to say that things, on balance, are still rosy—though a few voices mutter that the fanfares of triumph are being blown too loudly. The optimism finds its bases this way:

So far, the profit-taking sales have been absorbed as a whole in creditable fashion. As the bulls point out, most shares hit by selling have given ground only grudgingly, and the losses have averaged out to a negligible factor. Thus early this week the rails kept on climbing, refusing to be hampered by the huge gains made earlier in the month. Even the industrials and utilities—the hardest-hit groups—kept their indexes within spitting distance of the bull market highs set a few days earlier.

• **The Bulls**—Several technical factors have added to the convictions of the optimists:

• Institutional buying of stocks continues to be backed up by heavy purchasing by the public at large.

• The interest of the buyers has been rotating lately among the various stock groups.

On the psychological side, the bulls point proudly to the relatively orderly advances of prices all through the post-election boom, despite the numerous sensational individual gains. The bulls find none of the "emotional excesses" that marked the other great boom in

much-lamented 1929. The difference, they say, is that this time the prices are being pushed up by investment funds, rather than by the pyramided savings and paper profits of bootblacks, elevator operators, and the other victims of 25 years ago.

The bulls are ready to concede that the new price readjustment may go a bit further. But then they expect the forward march to be resumed. This faith, they say, will find more believers in the coming weeks as the evidence piles up that (1) there's a solid footing for the business recovery of the past months, and (2) 1955 will be a better-than-expected year.

• **Always the Bears**—This hopeful reasoning has failed to dent the hard core of the Wall Street bears. These havoc criers go so far as to claim some of the bulls aren't sure that things are so wonderful as the most bullish say. The bears, laughing contentedly up their sleeves, point out that an increasing number of bulls are coming to hedge their recommendation of "sizable invested positions in commons" with the rider calling for "carefully selected shares."

Even this hedge is growing thicker, with the added caution: "Still we would feel more comfortable having at least some cash reserves at hand. Watch your new purchases carefully, and be more conservative than ever. Keep in mind that the market is now valuing present and future earnings and dividends of many commons on a very rich basis."

By and large, the bears go along with the bullish contention that there are still signs of underlying strength throughout most of the stock list. And they accept that investment buying has given this bull market its primary strength.

• **Thinking**—At this point, the agreement ends. The bears accuse the bulls of overlooking a number of weak basic factors:

• Trading volume of late has tended to expand in times of price weakness and to contract during the rallies.

• The leading industrials, originally the main buying targets, now show no get-up-and-go at times when the rest of the market is strong.

The bears also deny that the market has been free from speculation. Margin is being used, they point out. From September, 1953, to the end of last month the debit balances of Big Board traders jumped 31%, to well over $2.1-billion—the highest since 1930. The pessimists are sure that this rate of increase has been stepped up since.

There has been a sharp increase in traffic in the $20-or-less shares, and in the cats and dogs. Thus on Monday nearly 5% of the Big Board's 3-million share day was supplied by three stocks selling at $3¼ or less.

Even in the blue chips, the bears maintain that there has been plenty of speculation. Many of these issues are now selling at more than 20 times their earnings. The yields they offer are the same, or even less, than those in the government and high-grade corporate bond markets.

Lengthening the Debt—Cautiously

The countrywide guessing game over how the Treasury Dept. would handle its $17.3-billion December refinancing ended last week. The announcement confirmed what a majority of observers had figured: The Treasury will offer no long issue but rather a package consisting of a medium-term bond—eight years, eight months—and two certificates of indebtedness, one maturing on Aug. 15, 1955, the other maturing in one year.

Like previous Treasury offerings this year, the December refunding is a move toward lengthening out the debt without causing dislocations in the money market (BW—Oct.30'54,p64).

• **Meanings**—Two obvious meanings can be read into the terms of the new issues. First, the medium-term bond, due Aug. 15, 1963, carries the same 2½% interest rate as the seven-year nine-month issue sold last February and thus represents further strengthening of the Treasury's easy money policy.

Second, as most observers were quick to point out, the maturity indicates some wariness by the government concerning the present economic situation.

The issues coming due are $8.2-billion of 1⅞% notes and $9.1-billion of 2% bonds, the last $510-million of which fall due Dec. 15, 1955, but are being called now. The new issues can be exchanged on a par-for-par basis.

• **Refunding**—It is estimated that about $7-billion of the maturing short-term notes, held by the Federal Reserve, will be exchanged for the new certificates. Of the remaining $10-billion to be refunded, it's estimated that $4-billion to $6-billion will go into the new bonds. Banks hold $270-million of the maturing notes and $5.4-billion of the bonds. The Treasury would undoubtedly like to see a heavy chunk of the new bonds go into these same hands.

The Treasury's announcement had an immediate effect on the bond market. Outstanding long-term Treasuries edged slightly upward, while bond issues to be refunded next month traded off slightly as many speculators who had figured on better refunding terms sold their holdings.



How Vapor-Wrapper® Prevents Rusting of Steel Products

Nox-Rust's Vapor-Wrapper is a chemically treated paper that instantly releases an invisible rust-preventive vapor. The vapor mixes with moist air, rendering it non-corrosive to iron and steel. Thus Vapor-Wrapper provides fast-acting, long-lasting protection in production, transit and storage.

Products protected with Vapor-Wrapper are clean, ready to use. There's no mess, grease, or goo; no expensive degreasing or cleaning is needed. Vapor-Wrapper is as easy to use as wrapping paper, and costs little more.

Write for Bulletin with complete information.

NOX-RUST CHEMICAL CORP.
333 North Michigan Avenue,
Chicago 1, Illinois
Offices in Principal Cities

MAIL THIS COUPON

Rust Prevention Engineering Service
NOX-RUST CHEMICAL CORPORATION
Dept. BW 1127,
333 North Michigan Ave.,
Chicago 1, Ill.



Please send me bulletin and free sample of Vapor-Wrapper. I want to use it for

.....
(part or product to be protected)

Name.....

Company.....

Address.....

City.....*State*.....

LABOR

UAW Hits Chrysler When It Hurts

● The auto company is now engaged in a life-or-death struggle to recapture a profitable share of the market.

● Threatened strikes at two manufacturing divisions would stop production of new models just when the consumer is most receptive.

The biggest question in Detroit this week—bigger even than who's ahead in the new model race—is whether the United Auto Workers (CIO) is going to wreck Chrysler.

What would be an absurd question at any other time has, just now, the greatest cogency. Chrysler is in what the industry considers a life-or-death struggle to recapture a profitable share of the auto market. Its stakes in getting consumer acceptance of its 1955 cars and producing them while demand is hot are tremendous. A strike that would stop production now—while the market is at its most receptive and while competition with other auto makers is at its most intense—could make the difference between defeat and victory for the company. In addition to everything else, the jobs of thousands of auto workers would be imperiled.

Yet the threat of just such a cataclysmic strike is being taken very seriously. In part, that's because every Chrysler problem is serious now. But it's also because UAW shows signs of taking every advantage of the company's vulnerability—in contrast to the way it treated Studebaker, for example (BW—Aug.21'54,p122).

• **Old and New**—Chrysler's trouble is compounded of some immediate problems that have UAW snarling at the company, plus an old background of ill feeling that tempts at least some UAW leaders to use long unresolved grievances and Chrysler's plight to harass the company. A strike authorization taken now can be held over the company's head indefinitely—maybe up to that point where the union wants to talk guaranteed annual wages with Chrysler, in advance of opening the subject with General Motors and Ford.

• **Personal Appeal**—UAW has never made a secret of its conviction that of all the major employers with which it dealt, Chrysler was—to put it mildly—the most troublesome. Reciprocating the feeling, Chrysler executives have been only a little less forthright about UAW. So dangerous was this situation as Chrysler approached its critical year that L. L. Colbert, brought to the company's top executive post a couple of years ago, made a direct approach to UAW just three months ago (BW—Sep.4'54,p43).

Colbert personally went before the UAW national Chrysler council—made up of delegates from union locals in all Chrysler plants—to ask for a better relationship. It was open acknowledgment that the company's relations with its workers had been bad. Colbert asked employees, through the union, to help the company regain a competitive position. Unless they did, he intimated, the company might be in serious trouble.

By all accounts, Colbert was well received at the closed meeting. If a dramatic personal appeal, patently sincere, could have wiped the slate clean it would have been a great triumph. But it now appears that the mission was unsuccessful. Either the feeling runs too deep or—as some in Detroit are now suggesting—lower echelons of Chrysler management have not been brought around to Colbert's attitude.

• **The Heat's On**—In any event, Chrysler today, with $250-million sunk in its 1955 production and promotion campaign, is jolted by strike votes in two of its big manufacturing divisions.

The threats to back up demands for settlement of alleged grievances were dropped in Chrysler's lap by UAW at the Automotive Body Div. and at De Soto.

Chrysler professed to be just as astounded by the action as was the rest of Detroit, which recalled vividly the tough year the corporation has gone through when layoffs went as high as 24,000.

Altogether more than 30,000 workers are involved in the current disputes at ABD plants in Detroit and Evansville, Ind., and at the Detroit De Soto operation. Most serious is the ABD threat. A strike at the body plants would shut down production of Plymouths, the corporation's big hope for 1955.

While no one in Detroit, at the moment, seriously expects the workers to walk out, the effect of the threats was not lost on Chrysler. For one thing, the adverse news was a blight on the public support that has grown with Chrysler's comeback bid.

• **Support**—Detroit, auto-jaded though it is, was actively pulling for the corporation. Even Chrysler's workers have been acting as unofficial salesmen for the new models. UAW members at the Chrysler Div. plant actually conducted a door-to-door campaign in the plant area recently to plug the 1955 car. And the city of Hamtramck, Mich., where the Dodge plant is located, changed its name temporarily to "Dodge City" last week and held a week-long celebration (BW—Nov.20'54,p114).

But the ABD and De Soto workers, while perhaps not yet in an actual strike mood, were serious about their demands. The strikes still would have to be approved by UAW leaders, but this was considered a technicality, if current negotiations really bog down despite this week's reports of "some progress" in Chrysler-UAW talks.

• **Integration Issue**—The biggest pitch came from the ABD employees, through their spokesman, Emil Mazey, UAW secretary-treasurer and head of the union's ABD department. The dispute there began when the plants were part of the Briggs Mfg. Co. and the trouble continued after Chrysler bought out Briggs last year. The problems of integrating the former Briggs workers into the Chrysler setup have stirred up a hornets' nest of grievances over seniority, wage rates, and production standards.

Mazey's most serious complaint, however, centered around the alleged discharge last summer of 24 ex-Briggs office workers some time before the UAW won a National Labor Relations Board representation election. Mazey insists they be reinstated, and also complains that no collective bargaining agreement has been reached covering the office force.

Chrysler denies that they were discharged. It said they were laid off the same time as other workers during the summer, and that they are on the recall list according to seniority.

• **Seniority Rights**—At De Soto, the major squabble is over seniority. The union says that during a previous labor shortage, the corporation hired women and now refuses to give them seniority rights. Chrysler, somewhat surprised at the charges, answered that some 500 women in two departments were af-

fected by new techniques on the 1955 car, but that all but a handful have been absorbed elsewhere.

Meanwhile Chrysler says it doesn't know why the grievances are not processed through the machinery and up to arbitration. That is what it wants done. At De Soto, for instance, the company met once with the union and offered to meet again, but got to no further word. Some of the grievances are old hat. One on the list at De Soto has been on just about every grievance list since 1937.



ADMINISTRATION of welfare funds is investigated by (left to right) CIO chiefs James Carey, James Thimmes, Joseph Curran, Arthur Goldberg, plus Labor Secy. Mitchell.

CIO Searches Its Soul

Union's new Ethical Practices Committee looks into charges that evils have crept into operations of welfare funds, finds the rumors have been greatly exaggerated.

CIO's campaign to insure maximum effectiveness and absolute honesty in handling union-negotiated health, welfare, and retirement funds got under way in New York this week—and promptly picked up a nickname, CIO's "Operation Goldfish Bowl."

It's an appropriate one, considering the assignment given CIO's new Ethical Practices Committee when it was set up by the organization's executive board in October. Concerned over reports of evils in welfare fund operations (BW–Sep.25'54,p106) CIO policymakers instructed the new group to:

• "Investigate any charges or allegations of maladministration of welfare or other funds within CIO."

• Formulate "recommendations for standards of welfare funds—and, if deemed necessary, for appropriate legislation to make certain that welfare funds are honestly administered."

The executive board added that CIO "will, in accordance with our own democratic procedures, take prompt and effective action on our own initiative" if financial corruption by CIO union officials should be established. According to the board directive, CIO intends to make sure its welfare programs operate open and above board, with the "sanctity of . . . funds" assured.

• **First Job**—When the Ethical Practices Committee met this week, it wasn't immediately concerned with



TOUGH on the hands

Every time a worker's hands are snared by jagged metal, production suffers, and insurance men take a second look at rates. Skilled hands should never be bare hands. Protect them with Jomac® Work Gloves. Jomacs, made of rugged, springy, twisted-loop fabric, cut accident rates in plants throughout the country. Jomacs are low in cost because they wear so long. Write today for our new catalog.



Send for a free sample of Jomacs. Describe your operations, temperature conditions, etc. We'll gladly recommend an economical Jomac Work Glove and send you a sample pair. Jomac Inc., Dept. A, Philadelphia 38, Pa.

It pays to keep Jomacs on hand

JOMAC

INDUSTRIAL WORK GLOVES

Outwear ordinary work gloves by 900%

Plants in Philadelphia, Pa., and Warsaw, Ind.

charges of fund evils. Its initial task was to hear suggestions from within and without CIO on how the administration of welfare funds might be improved. Arthur Goldberg, general counsel for CIO, assisted committeemen James B. Carey, James G. Thimmes of the United Steelworkers, and Joseph Curran of the National Maritime Union (picture, page 153).

Labor Secy. James P. Mitchell led off the two-day succession of friendly witnesses, praising CIO for "admirably seeking to solve certain problems which have developed within labor's health, welfare, and retirement funds," and offering any help the Dept. of Labor can give. Union welfare fund experts, insurance company representatives, and independent health and welfare fund consultants followed Mitchell.

• **Suggestions**—Generally, they agreed that the bulk of union-negotiated welfare funds has been honestly administered, and doesn't need any cleaning up, and provides workers "with a very substantial measure of security against the hazards which these programs were designed to meet."

Most had specific suggestions as to how the questionable funds might be cleaned up: More complete financial reports on funds, for one thing; periodic examinations of fund books; limits on commission payments—"while it is naive to assume that . . . elimination of commissions will in itself remove all mismanagement and corruption, we have come to the conclusion that payment of commissions in welfare funds should be eliminated," several witnesses said, with insurance company spokesmen objecting; and closer supervision by fund trustees, the unions and managements involved, and international unions over the adherence of funds to "ethical standards."

• **Ammunition**—Prior to the hearings, the CIO committee sent questionnaires to CIO-affiliated unions, asking 38 questions about welfare programs. The committee announced that the answers showed about 3.3-million CIO workers are now covered by pension and retirement programs, about 4.5-million by union-negotiated life insurance plans.

Contracts of CIO unions also provide accidental death or dismemberment benefits for 2.2-million workers; sickness and accident benefits for 4.5-million; hospitalization benefits for 4.6-million; surgical benefits for 2.8-million; and medical for 2.2-million.

According to the survey, about 75% of the CIO workers covered by retirement programs have their benefits provided through trust funds—whose trustees are "overwhelmingly . . . selected by the employer"; about 20% of the benefits are paid through insurance companies; and 5% are "apparently financed on a pay-as-you-go basis."

CIO noted that the survey pointed up the fact that there is in CIO "a heartening concern for the sanctity of these funds . . . and shows the existence of checks and balances procedures which is little recognized by the general public." As a result, it said, "It is our belief that corruption is not widespread among CIO unions."

Lining Up for a Fight on GAW

● Auto industry is keeping mum on UAW demands for guaranteed annual wage, and the argument that automation will mean layoffs.

● Off the record, industry men hint they will contend that automation will actually mean more jobs.

Two weeks have now passed since CIO's United Auto Workers made public its battle plans for 1955 (BW—Nov. 20'54,p166). They have had one effect that the union did not anticipate: The industry has met them with silence.

UAW had every reason to expect prompt and vigorous debate over its carefully prepared effort to use the manpower problems created by industrial automation as a rationale for the guaranteed annual wage. It was, after all, the first important union attempt to build collective bargaining demands around this highly publicized technological development. It was a bid for the intellectual leadership of all unions operating in manufacturing. And it presaged a large propaganda undertaking designed to sway public opinion in favor of the guaranteed wage.

Under these circumstances UAW counted on a sharp and immediate reaction from auto management. And like all serious debaters it was prepared for the reaction, keeping a couple of weighty arguments in reserve for rebuttal and sur-rebuttal. But thus far it has drawn a blank. The auto industry realizes that, if it leaves UAW's assertions on the record unchallenged, it may have a tougher time swaying public opinion if it is forced to respond at a later date. Nevertheless, the industry has decided to play it as if GAW was not a serious issue in 1955 bargaining.

• **Thinking**—By the end of the week, there wasn't an industrial relations man in the industry who hadn't studied the documents that came out of UAW's wage-policy conference in Detroit—particularly the one hooking up GAW and automation. At the same time, there wasn't an industrial relations man in the industry willing to comment publicly on UAW's proposals.

The auto spokesmen have reasons for reticence: Although every auto company has GAW studies under way, none will admit that the annual wage will be an issue next year. Under the circumstances, no auto company spokesman will comment on UAW's main thesis, that "the guaranteed annual wage becomes imperative for workers in the face of automation." A comment might give away bargaining strategy for next year.

• **More Jobs**—The only statement by a General Motors representative noted that GM has about doubled its employment since 1940 while increasing its use of automatic machinery. Ford Motor Co., which UAW cited as the industry's leader in automation, referred only to speeches made in the past by executives—not in the field of industrial relations but in manufacturing—explaining that automation will create more, not fewer, jobs in industry.

Here and there in the auto industry, a labor relations technician would go into some detail on a few points raised by UAW in its document on automation. But only one would refer, while demanding anonymity, to what the union said about the guaranteed annual wage and automation.

He conceded UAW's point that GAW would be an inducement to employers not to lay off workers, and that increased automation—at least temporarily—does lead to layoffs. But, echoing the common industry feeling, he said: "However, there is no annual wage yet and there might never be one, so we need not consider the problem."

In the observation of the few men who would talk—mostly off the record—and in the past speeches of executives referred to by Ford, there was a large measure of agreement with many of UAW's points about the development of automation. The differences between the union and industry lie in the interpretation of what the developing of automatic factories may mean. These differences of opinion may furnish a clue to the arguments that will be used at the bargaining tables next year.

• **Productivity**—One argument might

involve the productivity increases inherent in automation.

UAW contends that automation "will increase productivity, (and) increased productivity without increased total production is a formula for depression."

Ford says, "An increase in man's productive capacity is regarded as the only means to achieve an ever-rising standard of living. One observer developed figures showing that to provide for the same standard of living increase that the United States experienced between 1940 and 1950, an increased output of approximately 43% per worker will be required in the decade from 1950 to 1960."

Ray H. Sullivan, vice-president of Ford, says: "We believe that automation will create more, not less, jobs in industry, service and distribution. For example, the growth of automation will create many new jobs in electronic, machine-tool, and other industries."

• **Employment**—In other words, the industry people are thinking of expanded employment over the whole economy, not necessarily in the auto industry itself. This difference is apparent again in comments on automation's effect on employment:

UAW says: "If automation is irresponsibly introduced and exploited, it will bring unemployment and misery instead of security and abundance. The radical productivity increases which will accompany automation make it necessary to intensify the fight for an economy based on full production and full employment."

Ford says, "Automation at Ford conserves manpower but it does not eliminate men from the industrial scene."

D. S. Harder, vice-president of Ford and originator of the term "automation," says: "Many have said that automation would displace labor and cause widespread unemployment. Certainly the same things must have been said about all of the other significant advances in manufacturing during the last 50 years. In my opinion, automation will do just the opposite. It will create more jobs—create more products at less cost—and increase the ability of people to consume."

Sullivan says, "In the forward march of technology whole new industries are created which provide new job markets for our industrial worker. The higher the wages we earn the greater will be the demand for the things that American workers produce. The lower the prices we charge, the more we can afford to buy. With more leisure time, we will buy more radios and television sets, home workshops, sporting goods, and other recreational equipment which has not yet been invented. All these things that add up to a better life for you and me also add up to more and better jobs for the people who manufacture and service the goods we will buy. Thus the effects of automation should reach out through the whole fabric of our economic and social life, raising our living standards at a rate we haven't even imagined."

• **Responsibility**—The union has more to say about "irresponsibility" in expanding automation, and this apparent distrust of management's social conscience inspires UAW's demand that the guaranteed annual wage be adopted as a control on automation.

For instance, UAW says: "Under the guaranteed annual wage, management would avoid the introduction of automation in times when major layoffs would result. The introduction of new and more efficient equipment would be geared to periods of expanding markets so that other jobs would be available. Similarly, the guaranteed annual wage would then assure that new and more efficient plants are so located as to avoid mass layoffs of workers employed in existing plants. In the absence of the guaranteed wage, irresponsible corporate decentralization policies, accentuated by the introduction of automation, would leave thousands of workers stranded and give rise to the widespread creation of ghost towns."

• **Gradual Shift**—Sullivan says, "There is no great danger that automation will create sudden upheavals in our way of life. The automatization of American industry must necessarily be a slow and gradual process. Since the growth of automation will be evolutionary and not revolutionary, it would have no abrupt, harsh impact upon our working population—no more than the gradual shifting of employment from dying industries into new industries to which we are thoroughly accustomed. And let's all remember that the willingness to make such shifts is essential to the dynamic American economy. It will be a sad day for America if the time ever comes when we are locked in our present jobs."

The industrial relations man commenting directly on UAW's argument tackles the issue head-on. He reflects management thinking as he says, "It's not necessarily so that automation under GAW would be introduced only during periods of expanding employment. The employer might have committed himself to the purchase of automated equipment but a year later find that the expansion of employment had vanished. Or, assuming that the employer was in a period of declining employment, he might nevertheless decide to automate regardless of GAW in order to improve his competitive position."

• **Higher Skills**—The union and industry again find themselves in agreement

Dripping grease costs you money!



You're not getting maximum efficiency or economy of operation if your materials-handling equipment leaves a slick trail of grease like this.

Bassick "3D" casters with sealed bearings eliminate these hazardous floor conditions, offer longer trouble-free service life, and eliminate maintenance problems.

Grease lost from bearings exposes them to premature wear, which increases your maintenance and repair problems. Dripping grease is also costly due to its harmful effect on floor surfaces and rubber tires.

Bassick's new "3D" sealed casters assure the sealing-in of lubricants while protecting the bearings by excluding harmful dirt, water and other foreign matter.

"3D" Caster

(No Dirt, No Drip, No Drag)

New design seals grease in, keeps dirt out.



Write for Catalog Sheet 3D99-53. Find out how "3D" casters can cut your maintenance costs. THE BASSICK COMPANY, Bridgeport 2, Conn. *In Canada:* Belleville, Ont.



Bassick
A DIVISION OF STEWART SW WARNER

MAKING MORE KINDS OF CASTERS... MAKING CASTERS DO MORE

75 YEARS OF CASTER LEADERSHIP

that there will be higher types of skills required by automation. Sullivan, for instance, says, "We may need fewer sweepers, fewer unskilled workers with monkey wrenches, but we need many more engineers, electricians, mechanics, electronic experts."

This, of course, is a development that has been going on for years. The Department of Labor reports that in 1900 there were 4.3-million skilled workers and 5.4-million unskilled; in 1950 there were 7.9-million skilled and 3.6-million unskilled. The argument is over the pay scale in automated plants and UAW says, "Automated equipment is a signpost of changed jobs in the factory requiring the negotiation of new classifications carrying higher rates."

The industrial relations man says, "Rates should go down as well as up in automation. Assume you have a set-up man in a plant. The plant becomes automated. The man's work becomes such that he is only required to replace worn-out tools. In my opinion, his rate should go down, not up."

An umpire between union and management says, "The union's attitude that they want an increased share of the profits whether the employee works harder or not is nothing new." He says he encountered this attitude before and pointed out to the union involved that the employees were getting better consideration than the stockholders and that some consideration should be given the public in the form of lower prices.

UAW had made the point that higher rates should reflect the increased investment (in machinery) per worker. The industrial relations man sides with the umpire: the gains of increased productivity should be shared by the investors and the public as well as the workers.

• **Seniority**—One of the most serious points raised by UAW in its paper on automation is the effect of advancing technology on seniority, and the need to retrain workers for higher skills. The union wants the retraining to be at company expense. Ford doesn't argue that retraining isn't necessary. In fact, Harder says, "It is apparent that our production people must be more highly trained than in the past. Our management has found it necessary to assist in preparing for this new type of work." But that was in a speech made before UAW stated its position.

UAW's point on seniority is that it must be made more flexible and broader because of automation. In fact, says UAW, seniority should extend outside individual plants and be effective for all plants in an area of a multi-plant corporation. To the industrial relations man willing to talk last week this is a step backward. He cites Studebaker as an example of the bad results from plant wide seniority. "At Studebaker," he says, "a laid-off seniority employee can bump any low seniority employee and have a 10-day trial period in the job. The bumped employee in turn can start another series of bumps. The result is poorer quality and higher costs." Under UAW's approach, this man believes, "fewer people will get the product service, purchasing power will be reduced, jobs will be fewer, and union members will be walking the streets."

LABOR BRIEFS



Telephone call from a special booth in New York's Grand Central Terminal puts a man with labor woes in touch—by direct phone line—with the regional office of the U.S. Labor Dept. for advice. The plan costs $1 a day to operate, and may be adopted in other cities. Its aim: to narrow "the gap between . . . the department and the working man." On the first full day, 39 used it, asking a variety of questions—and reporting a number of labor-law violations.

•

A union-shop ban by a Texas state court in a case involving the Santa Fe Ry. and 16 operating unions was upset last week on an appeal by the unions. The test case, to determine whether Texas' right-to-work law or the federal Railway Labor Act legalizing the union shop takes precedence (BW—Nov.14 '53,p180), is expected to reach the U.S. Supreme Court.

•

A 12-hour limit on the time railroad workers can be required to work at one stretch will be sought by rail unions at the next session of Congress. Under a 1907 federal law, the limit now is 16 continuous hours of work. The move to reduce the time "for the health and safety" of workers has the support of eight major brotherhoods.

•

In Canada, workers represented by the United Electrical Workers in seven plants of Canadian General Electric Co. accepted a new contract without a wage increase but with a ninth paid holiday annually . . . A strike by the United Auto Workers (CIO) against Ford Motor Co. of Canada continued into its seventh week, idling 8,300 in Ontario; the key issue is a wage demand.

•

Law firm of Woll, Glenn & Thatcher, in Washington, attorneys for the AFL, Brotherhood of Teamsters, and other unions (BW—Sep.4'54,p50), will be dissolved next month. The splitup is described as "amicable," but there's no decision yet on how the partners will divide accounts—among the most lucrative in labor circles.

•

Auto salesmen and demonstrators are being organized in Detroit—and nationally—by the Brotherhood of Teamsters (AFL), which is out to boost its membership from 1.3-million to 2-million. In Detroit, the union claims 3,100 of 4,500 salesmen signed up.

•

Department store strike in Pittsburgh will be a year old next week, with observers holding out little hope for a settlement before early 1955. Recent efforts to end the Brotherhood of Teamsters (AFL) walkout collapsed (BW—Oct.23'54,p168). However, the stores' growing anxiety could lead to new efforts to end the strike after the Christmas shopping rush.

•

The Supreme Court this week refused to review a lower court decision that an employer's "anti-union" speeches just before a National Labor Relations Board election "prevented a free and fair" vote, and that the result—a union defeat—was rightfully disregarded by NLRB. The board held a second election, over the employer's protest, and the Amalgamated Clothing Workers (CIO) won bargaining rights in a California clothing store chain.

•

An NLRB ruling last weekend limited voting in a representation election at Park Drop Forge Co., Cleveland, to United Auto Workers (CIO) members who returned to jobs after a long strike (BW—Apr.24'54,p148) and new employees hired during and after the walkout. The board ruling, in line with Taft-Hartley provisions, brought protests from UAW. The ruling just about kills the auto union's hopes of retaining bargaining rights at Park Drop Forge.

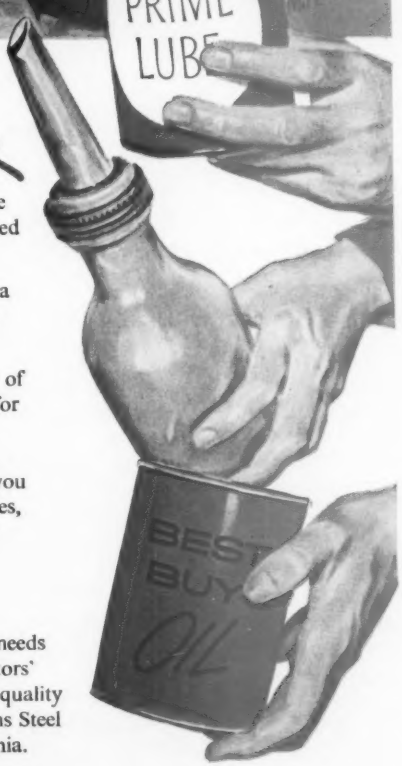


How to tackle a tough customer—

Take a smart buyer like the fleet operator. Small differences in price and performance of his oil and lubricants become major purchasing decisions, especially when multiplied by the number of trucks he has on the road.

That puts it squarely up to the refiner. To land *and hold* this order, he has to deliver a constantly improved product, at a competitive price. And today, more than ever, his market position depends on how efficiently his processing equipment can produce.

What about *your* tanks and pressure vessels? Are they efficiently processing a variety of feeds . . . keeping corrosion from eating into profits . . . meeting your requirements for pressure, or high or low temperature service? If not, you will want to plan replacements. And here, because you can afford only the best, it pays to start with a *qualified* fabricator. Working with your own engineers and consultants, he can help you plan away shutdowns and reduce maintenance. Through his own abilities and facilities, he can give you close control over every detail of fabrication. The result: equipment dependability which will help you keep your competitive edge. It will pay you to discuss your needs with your fabricators *early* in your planning.



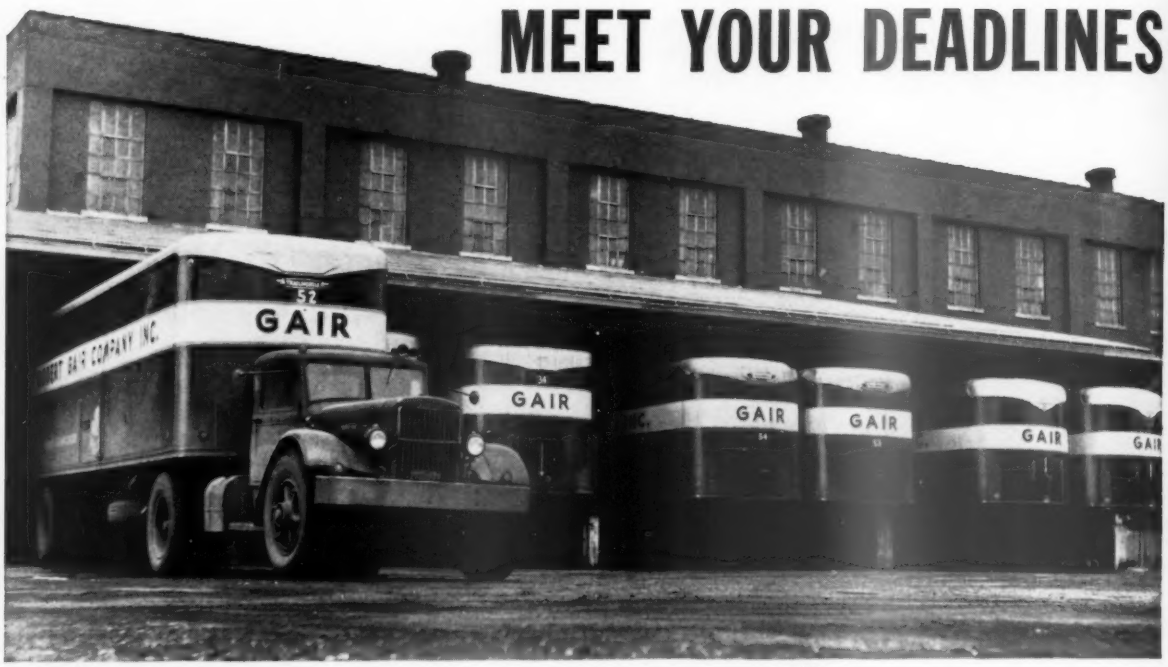
LUKENS

Or, for the names of those who can serve your process needs best, outline your problem to us. Lukens *knows* fabricators' qualifications from 144 years of service as a supplier of quality materials. Address: Manager, Marketing Service, Lukens Steel Company, 669 Lukens Building, Coatesville, Pennsylvania.

Lukens Steel Company, World's Leading Producer of

SPECIALTY STEEL PLATE · PLATE SHAPES · HEADS · CLAD STEELS

GAIR can help MEET YOUR DEADLINES



with assured delivery service

It's not hard to get a promise of shipping container delivery. But often there are a number of "ifs" in that promise. "Ifs" that don't exist at Gair.

"If our supply of raw materials permits, we'll be able to deliver on schedule" is one of the "ifs" you won't find at Gair. Our raw materials are grown in our own forests, processed in our own plants. We don't run short.

"If our manufacturing schedule holds up" is another qualification you won't hear from Gair. We have *eleven plants*, equipped to fabricate whatever quantities and types of corrugated or solid fibre shipping containers you need.

"If local transportation facilities stay on schedule" is a third worry you don't have with Gair. Gair trucks provide a neighborhood service from strategically located plants.

Check your nearest Gair plant for the complete story on Gair-designed shipping containers to meet your specific needs. SC.4.2

GAIR CONTAINER PLANTS

Cambridge, Mass. • Cleveland, Ohio • Holyoke, Mass. • Los Angeles, Cal. • Martinsville, Va. • No. Tonawanda, N.Y. • Philadelphia, Pa. • Portland, Conn. • Richmond, Va. • Syracuse, N.Y. • Teterboro, N.J.

GAIR

SHIPPING CONTAINERS
FOLDING CARTONS
PAPERBOARD

ROBERT GAIR COMPANY, INC. • 155 EAST 44TH STREET • NEW YORK 17

PERSONAL BUSINESS

BUSINESS WEEK
NOV. 27, 1954



Several special Christmas problems are likely to confront you this year. Here are some thoughts on the main ones:

If you're giving more modest "business" Christmas gifts—or none at all—to other executives this year, you have a lot of company.

A Business Week survey shows a pretty strong trend away from the lavish outpourings of a few years back. The general feeling: Things had got out of hand for a while. Now there's a swing toward more concentration on the spirit of Christmas.

Many companies that have cut out gifts altogether during the past few years now send the money to charity. A letter explains to the erstwhile recipient what became of his gift.

That doesn't mean that business gifts are either taboo or always carry the taint of potential bribery. But use the change in attitude on the part of both givers and recipients as a guide to your choice of gifts.

You'll find the same general theme of restraint regarding office parties. Some companies have given them up, or forbidden employees to hold them. Others have more sedate affairs than before, and with smaller groups. Still others have switched to having parties for employees' families—with Santa Claus and presents for the kids the main feature.

These are all signs of a growing re-emphasis on Christmas as a home-and-family religious holiday.

Finding the "perfect" gift for your wife can also be a problem. But this year you'll find plenty to choose from in the luxury line—and at better prices.

Fur is a particularly good value. There's a great abundance, variety, and wide range of price in capes, stoles, jackets, as well as coats. (You might look into the novelty pastel furs: pink mink, blue fox.)

There are also lots of good imports around, fairly priced, often highly individual—for example, some Italian leathers and knit goods; French gloves, stoles, perfumes; scarves from India.

If your wife has been vague as to what she wants, and you can't decide, try a "for-men-only" department. More and more stores are setting up these personal shopping services, where experienced buyers are on duty to help out harassed husbands.

It won't help much unless you give the buyer as much information as you can about your wife's sizes and coloring. A description of her taste and personality is important, too. Enough such information—and a little thought on your own part—can cut your shopping time (or your secretary's) to a minimum.

When doing it on your own, copy one of your wife's tricks to simplify your shopping: Keep an eye on the newspaper ads. They will give you an idea where to find what—and at what prices.

Take note of the special luxury clothes for women that have become popular for at-home entertaining. They include embroidered felt skirts, hostess robes, decorated slippers. And remember that you can scarcely go wrong with a cashmere sweater. Good ones run from $25 up into the hundreds

How do you get children on Christmas vacation to spend enough time with the family?

It's largely a personal and family matter, of course. But as a general rule, you'll save yourself a lot of grief if you accept the fact that basically your children want to be on their own most of the time.

Thus plans for family parties can sometimes backfire; kids' own parties and those of their friends are far more important to them. It may seem that they want nothing from you except the family car and some spare cash. But remember that they still need you as much as ever—although for this vacation, perhaps just as a backdrop.

One way to see something of them: Give them the run of the house for their own parties—including permission to raid the icebox. And you might take them to lunch one day at your club or company restaurant.

—•—

Your car's reliability in wintertime depends largely on proper care of it by you. Detroit auto men offer these suggestions:

• Keep your battery charged; have it checked often. A low battery will freeze at 15 deg. above zero, sometimes higher. Don't add water to it on sub-freezing days unless you plan to drive farther than a few blocks. Until the water mixes thoroughly with the battery acid, it may freeze.

• A common cause of winter stalling is ice in the gasoline lines. It's caused by moisture in the air and water vapor in the gasoline condensing in the tank —and then freezing.

Best advice: Keep the tank full, particularly if you leave the car out at night. You cut down chances of water separation that way.

• Carry bags of sand (a couple of sugar sacks will do; you can refill them at any highway sand pile). **Sand sprinkled liberally under rear wheels will help them get traction if you get stuck.** Also, the weight of sandbags carried in the rear of your car will add a lot of gripping power to your rear wheels.

• Chains are still best for traction; they will cut down braking distance as much as 50%. **It's wise to use both snow tires and chains.** Snow tires give better-than-average traction on packed snow and ice.

• Some authorities say that driving too slowly is just as bad as driving too fast on ice; you can skid just as easily. What's important is a sudden change of speed rather than speed itself.

—•—

Good news for golfers: **National Golf Foundation says 80 new courses opened during the first nine months of 1954,** another 198 are under construction. And about 350 more are in some stage of planning.

—•—

An unusual record album, The Confederacy, has been put out by Columbia Records on a 12-in, long-playing recording. It contains Civil War songs popular in the South during the War Between the States, as well as Lee's farewell address, recited by one of the general's descendents.

—•—

A handy desk reference for the executive is the Basic Everyday Encyclopedia (Random House; de luxe edition, $2.95; regular edition, $1). At your bookstores now, it contains thumbnail information in most fields of human knowledge.

Contents copyrighted under the general copyright on the Nov. 27, 1954, Issue—Business Week, 330 W. 42nd St., New York, N. Y.







"Thought for food"

Tote Boxes of U. S. Royalite!

Food Fair Stores, Inc.—7th largest, and fastest growing food chain in the nation—has *obviously* had *many* worthwhile thoughts on the handling and merchandising of food. And one of the latest is the use of *U. S. Royalite Tote Boxes* for the preparation and distribution of refrigerated meats, cheeses, fruits and vegetables.

Why U. S. Royalite?

Food Fair found U. S. Royalite boxes are so tough they can be banged around all day without cracking, chipping, or splintering—even at sub-freezing temperatures. *They're tough enough to outlast other types of containers a dozen times over!*

Extremely light, too, these Royalite tote boxes sharply reduce handling weight. And their special design allows both nesting when empty and positive, non-slip stacking when full.

And, of course, these U. S. Royalite tote boxes are completely non-toxic—unharmed by food juices and other chemicals encountered in food handling—approved by health authorities.

Whether *your* thoughts run to food, small parts, or practically *any* materials handling problem, chances are you'll find it's "another case for U. S. Royalite". Available in a range of sizes and attractive, clear-through colors, U. S. Royalite Tote Boxes have proved their value not only to Food Fair, but to manufacturers by the hundreds.

Why not write us today?

U.S. ROYALITE
TOUGH PLASTIC PRODUCTS

US RUBBER

UNITED STATES RUBBER COMPANY
2638 NORTH PULASKI ROAD, CHICAGO 39, ILLINOIS

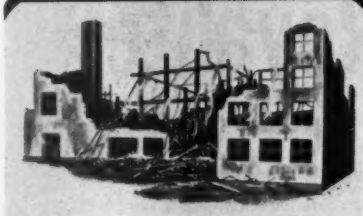


One look at the crystal ball tells Speedy "Spec" that your business is in for keen competition in the days ahead. To stay in the lead, your products will have to be better than ever. And customers will insist on quick delivery of goods—undamaged on arrival. That's why SPECTOR, with expert crews operating modern trucks out of 17 strategically-located terminals, can predict a bright future for you through *fast, safe, delivery!*

SPECTOR

HOME OFFICE: 3100 S. Wolcott Avenue
Chicago 8, Illinois

TERMINALS: Boston • Bridgeport • Chicago • Decatur
Indianapolis • Milwaukee • Newark • New Britain
New York • Peoria • Philadelphia • Providence • Racine
Kenosha • St. Louis • Springfield, Mass.
Trenton • Worcester



After the fire...



"Fire insurance settlements are fast—when you have an up-to-date Lloyd-Thomas appraisal!"

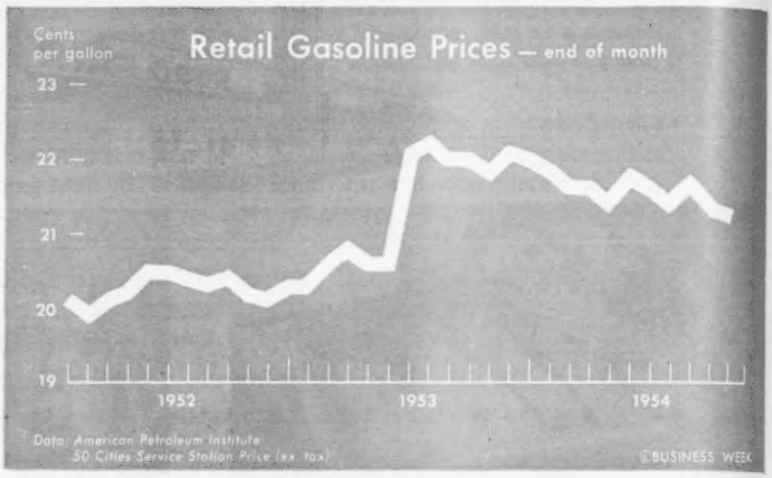
• Fast and satisfactory settlement of a fire-loss claim depends upon the available "proof of loss." Your Lloyd-Thomas appraisal — made before the fire — equips you with acceptable and provable evidence of value. *Send for booklet, "What every businessman should know about fire insurance."*

THE
LLOYD-THOMAS
RECOGNIZED APPRAISAL AUTHORITIES CO.
4411 Ravenswood Avenue, Chicago 40, Ill.

First for Factual appraisals since 1910

OFFICES — COAST TO COAST

CHARTS OF THE WEEK



Lowest in 17 Months

The retail gasoline price as measured by the American Petroleum Institute's 50-city service station price, was 21.28¢ per gal. on Nov. 1—the lowest in 17 months. The 50 cities include two in New York State and one in each of the other 47 states and the District of Columbia. The price is a simple average of service-station prices, exclusive of taxes.

Top-heavy gasoline supplies, combined with a demand only slightly greater than last year, are influencing prices. In some areas, suppliers are helping out the dealers by increasing allowances; a few weeks ago allowances in the northern New Jersey area were increased 1¢ to 2.6¢ per gal. In some parts of northern New Jersey the retail price, including tax, has dropped as low as 18.9¢ per gallon.



A Record for October

The number of housing starts continues to set records. This October, 106,000 houses were begun: a record for the month, even in 1950, a year which is itself a record. The boom, which had showed signs of slackening in the first part of this year, picked up momentum in June and has rolled right along since then.

The outlook seems good for continu-



It Costs No More To Give More—
If You Give The Bonus In Savings Bonds!

If your company is one of the more than 45,000 companies that have the Payroll Savings Plan you *know* what your employees think of Savings Bonds—they spell it out for you every month in their Savings Bond allotments.

If you don't have the Payroll Savings Plan, and are wondering whether your people would like to receive their bonus in Bonds, here are a few significant facts:

—every month, *before they get their pay checks or envelopes*—8,500,000 men and women enrolled in the Payroll Savings Plan invest $160,000,000 in U. S. Savings Bonds.

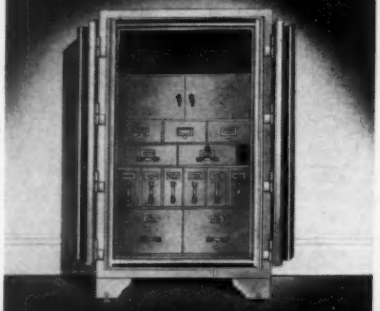
—Payroll Savers hold their Bonds: In the three years since the popular E Bond commenced to mature (May, 1951 to September, 1954) over $14,000,000,000 have come due. Throughout this period approximately 75% of the maturing bonds were retained by their owners under the automatic extension plan.

—on September 30, 1954, the cash value of Series E and H Bonds—the kind sold only to individuals—totaled 37.8 billion dollars, a new high.

To the Payroll Saver, and to the man who buys his Bonds at a bank (because his company does not provide the Payroll Savings Plan) a One Hundred Dollar Savings Bond looks bigger and better and *is* bigger and better, than a check for $75. *Make this a merrier Christmas for every employee. Give the gift that keeps on giving.*

The United States Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and the McGraw-Hill Publishing Company, Inc.

THE ULTIMATE IN
Fire Safety

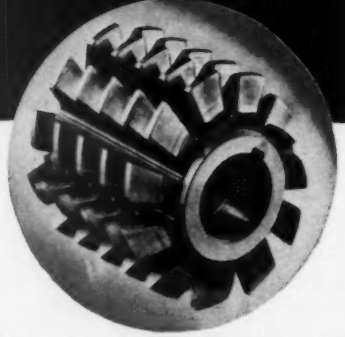


This is a Meilink Class A safe. You can't buy a safe which will give your priceless records a higher degree of protection from fire. For this safe, like all Meilink Class A safes, has passed Underwriters' Laboratories ultimate fire-explosion-drop test. Remembering that 4 out of 10 companies suffering a severe fire never open their doors again, you will not be satisfied with anything less. Various sizes, single or double door, with flexible interior arrangements. In the Yellow Pages or write the Meilink Steel Safe Co., Toledo 6, Ohio.

with MEILINK SINCE 1890 it's for keeps

PRODUCTION OF CUTTING TOOL INCREASED

From 673 Pieces to 4937 Pieces.



This report is another in the countless ways Vapor Blast Liquid Honing is saving money — increasing production for industry.

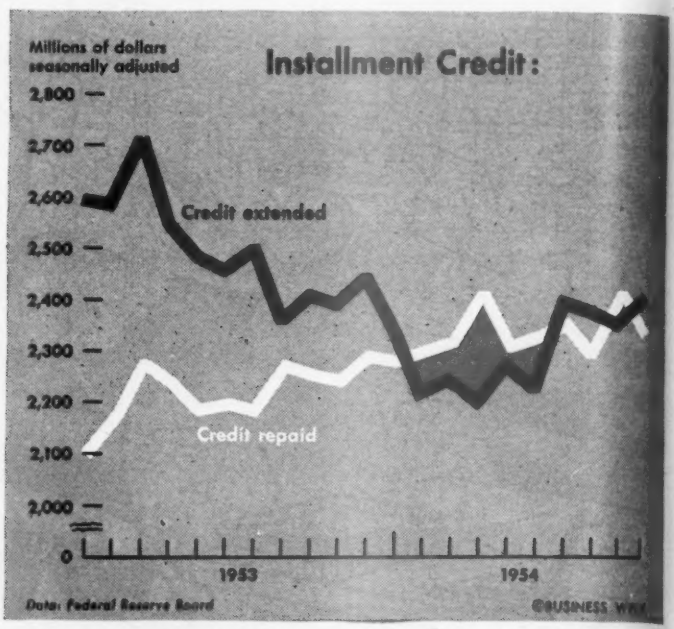
Write for Executive Report #452 on many other cost saving applications.

Vapor Blast & Liquid Honing are trademarks.

VAPOR V-B BLAST MILWAUKEE WISCONSIN

VAPOR BLAST MFG. CO.
3043 W. Atkinson Ave.
Milwaukee 16, Wis.

ation of this high level building, especially since the Congress authorized easier mortgage terms last summer. The Federal Housing Authority is said to have had a record number of applications for mortgage insurance in October, on top of a record number in each of the two previous months.



Consumer Goes Into Debt Again

Earlier this year the figures for consumer installment credit extended and repaid reversed their historic relationship. Consumers, wary of a depression, started paying off their debts at a faster rate than they assumed them. Since June, consumer confidence apparently has increased and once again the trend is toward more installment buying. This is just the pickup in consumer buying that businessmen have been looking for (BW-Nov.20'54,p.30), now that they feel that the course of business today depends on the consumer to a greater extent than it ever did in the past.



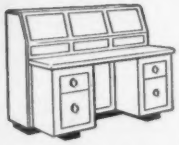
The Accent Is on the Table

Figures for retail food sales seem to confirm the theory people today are placing more emphasis on what they buy for the table than they have in the past (BW-Nov.13'54,p134). As a result, retail food sales at the end of September (on a seasonally adjusted basis) were 1% ahead of 1953, at a time when consumers' spending on durable goods was lagging.

FASTEST THING IN FASTENINGS®



SPEED NUTS® "build in" 30% savings on enclosure system



● Here's how the Elgin Metalformers Corporation, Elgin, Illinois, reduced the total cost of its EMCOR control equipment enclosures by 30%!

The basic EMCOR console requires 276 mounting holes for various assembly arrangements. Formerly, each hole was tapped . . . tight tolerances and paint clogging presented a costly problem. Now, the use of 40 "J" Type SPEED NUTS makes it unnecessary to tap the holes. SPEED NUTS provide the right amount of float, eliminate the problem of paint clogging, and furnish an attachment 3½ times stronger than the former fastening method. And they can be easily moved from hole to hole, wherever attachments are to be made.

In other applications, SPEED NUTS replaced 48 weld-type fasteners to help gain a substantial saving in assembly space as well as the over-all saving in production costs!

Ask your Tinnerman representative for data on better, more economical fastening methods for your own products!



"J" TYPE SPEED NUTS

These standard Tinnerman fasteners snap over panel edges by hand. They are self-retaining in center hole locations providing quick, easy fastenings even in blind assemblies. A full range of panel thicknesses and screw sizes are available to meet your particular requirements.

Write today for your "SPEED NUT Savings Stories" booklet of typical Tinnerman savings to industry: TINNERMAN PRODUCTS, INC., Box 6688, Dept. 12, Cleveland 1, Ohio.

In Canada: Dominion Fasteners Ltd., Hamilton, Ontario. *In Great Britain:* Simmonds Aerocessories, Limited, Treforest, Wales. *In France.* Aerocessoires Simmonds. S. A.— 7 rue Henri Barbusse, Levallois (Seine).



TINNERMAN Speed Nuts®



MORE THAN 8000 SHAPES AND SIZES



ITALY Vincent di Paola, 40, came from Naples three years ago. He's doing maintenance work at de Havilland of Canada now.



BRITAIN Stuart Neil, 53, is three years in Canada. From Chester, England, he's chief electrical and electronic engineer at DH plant.



SOUTH AFRICA Denys Louw, a production process engineer, is a two-year Canadian from Pretoria.

Melting Pot of Labor



BRITAIN Jean Salmon, a secretary at DH, came from Gorleston-on-Sea, Norfolk. She has been in Canada only six months.



POLAND Boleslaw Orlinski, 55, came first from Warsaw to fly with the RAF. Now he processes contracts for the U. S. Air Force at DH.



CANADA



ESTONIA Voldemar Puno's home in Tallinn is now part of Soviet Russia. Puno, a sheet-metal worker, has been four years in Canada.

Workers of many nationalities (left and below) have flocked to Canada, where their skills and readiness to work hard have found a welcome. Up to now, Canada's fast-growing economy has provided jobs for all. Now some conservatives in politics and labor are wondering about this . . .

Should the Lid Be Put on It?



Hermann Wassenberg, 42, formerly of Wolfsburg, Germany, is a prudent man. He has a good job at an aircraft factory. He saves his money. He has a part-time night job cleaning a business office; after he has the money to buy a house, he'll go easy on the night work.

For 12 years before he came to Canada in 1951, Wassenberg worked at the Volkswagen plant at Wolfsburg, making dive bombers during the war and the buglike people's car since then. While the Volkswagen is popular in Canada, Wassenberg will have none of it. He's proud of his 1953 Canadian Ford and asks why should he support German industry when he's part of Canada.

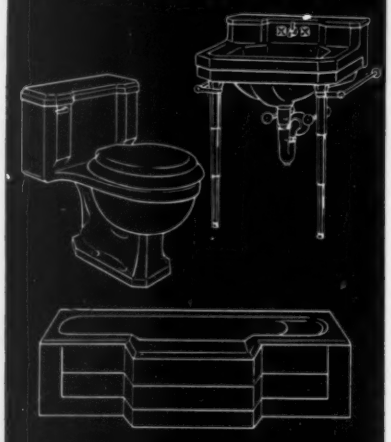
In the Toronto plant of de Havilland Aircraft of Canada Ltd., where Wassenberg is an airframe erector, you hear foremen cracking that their sections seem like a United Nations. Itself an immigrant (DH came to Canada in 1927), the plant counts 30% of its 2,500 employees as postwar newcomers to Canada. Most of them feel much as Wassenberg does. As for Canada, it needs the Wassenbergs as much as they need Canada.

• **How Many Jobs?**—Canada is a big, raw-boned country, and it must have more people to fill out the empty spaces on the land, in factories and mines and logging camps. If you press him, just about any Canadian will agree that the



GERMANY Hermann Wassenberg (left and center above), was a Volkswagen employee. For a look at how he and his family are faring, turn page.

Plumbing fixtures
for every home, commercial
and institutional use



CAST IRON • FORMED STEEL • VITREOUS CHINA • BRASS

ELJER

A subsidiary of the MURRAY Corporation of America

LOEW'S INCORPORATED

MGM PICTURES · THEATRES · MGM RECORDS

November 17, 1954

The Board of Directors has declared a quarterly dividend of 25c per share on the outstanding Common Stock of the Company, payable on December 24, 1954, to stockholders of record at the close of business on December 7, 1954. Checks will be mailed.

CHARLES C. MOSKOWITZ
Vice Pres. & Treasurer

Atlas Corporation

33 Pine Street, New York 5, N. Y.

Dividend No. 52
on Common Stock

A regular quarterly dividend of 50¢ per share has been declared, payable December 20, 1954 to holders of record at the close of business on November 29, 1954 on the Common Stock of Atlas Corporation.

WALTER A. PETERSON, *Treasurer*

November 16, 1954.

OPPORTUNITIES

business; personal or personnel; financial; equipment; etc., may be offered or located through the classified advertising section of BUSINESS WEEK

• • • • • • clues



THE WASSENBERGS, three years in Canada, live simply in Toronto apartment. Hildegarde (13) and Heinz (12) often help their parents in Wassenberg's part-time night job . . .

(Immigration story starts on page 166)

nation must continue to import hands from abroad. How many, and when, is the big question.

Over the past few weeks, Canadians have been doing more soulsearching than usual about immigration policy. The debate will pick up now, for the government has to decide on a policy for 1955 by the time Parliament reconvenes in January. Labor, eying unemployment figures, is leery of continuing the present immigration level. Management says bring them on—we can employ them. Ottawa is weighing the arguments.

Canadians without jobs and seeking work, 167,000 in September, were 3% of the labor force, twice as many as a year ago when unemployment was rock-bottom. And while that 3% is way down from the 1954 peak—6% jobless in March—the time of seasonal unemployment is coming, and the out-of-work figure is rising sharply as winter sets in.

• **Racial Mix**—Until 1949, the first permanent settlement of Europeans in what is now Canada was French, at Port Royal, in Nova Scotia, in 1605. But four years ago, when Newfoundland became the 10th province, the British gained a claim to having been first in Canada. Sir Humphrey Gilbert occupied the island in the name of Elizabeth I in 1583, and some settlers had already preceded him. Today, both racial stocks—Britons, with 47% of the population, and French, with nearly a third—can make a case that their forebears were first.

Germans settled Nova Scotia in 1749; today they make up the third ranking group by racial origin, or about 4% of the population. And of Canada's 1-million postwar immigrants, Germans have been the second-largest contingent, 12% of the total compared to Britain's 30%. Beyond that, the breakdown of racial origin in Canada includes, in order of size: Ukrainian, Dutch, Polish, Jewish, native Indian and Eskimo, Italian, Norwegian.

As Canada's population has grown, so has the proportion of native-born Canadians. In the 1951 census, 85% of the 14-million total were born in Canada; in 1941 it was 82%. This fall's 15.3-million population undoubtedly continues the trend.

• **Who Gets In**—Until the war, there were four broad categories of admissible people: (1) British subjects who could maintain themselves until they found jobs; (2) U.S. citizens who could maintain themselves; (3) wives and relatives of Canadians and (4) farmers. In the immediate postwar era, immigrants were largely war brides, displaced persons, and Polish veterans of British forces.

• **Policy**—In May 1947, Prime Minister W. L. Mackenzie King laid out a new policy for the future. Canada, said King, must spark its growth by encouraging immigrants, up to the limit of its capacity to absorb them.

Canada's present Immigration Minister, J. W. Pickersgill, figures that one of every 15 Canadians either has come to Canada, or is the son of someone who has, since King's speech. In the U.S., that would be the equivalent of



... in hope that the family can one day afford a house. Right now, the 1953 Canadian Ford is their major luxury—and Wassenberg wouldn't trade it for a Volkswagen.

10-million new Americans in a decade.

Restrictions were eased—for Britons, Americans, Frenchmen. Many more European relatives were admitted. The government took to hunting people specifically for work in industry.

• **Ontario Scheme**—Ontario has been by far the most active province in proselytizing newcomers; it has needed help in its war-expanded industrial plant. In 1946, Provincial Premier George Drew (now leader of the Conservative opposition in Ottawa) initiated an immigration plan of his own, called "Drew's Airlift." Through Transocean Air Lines, Oakland, Calif., he arranged space for 7,000 British immigrants, demanding only that they be employable and promising them jobs on arrival. It worked, and 3,000 more came in the next year. Ontario has also taken part in the movement of Dutch families, 25,000 persons in all, to settle on farmland.

• **Getting Selective**—Sponsored immigrants, those with a promise of jobs, have never been Ottawa's worry. Unsponsored people, too, were guaranteed jobs on farms or as servants. Many professionals, even a couple of ballet dancers, indentured themselves to a year in the woods or on a farm before searching other jobs.

Steadily the government has become more selective. Immigration authorities are kept informed on employment needs by the Dept. of Labor. An employer indicates his need of welders, and, immigration offices in Europe are flagged.

Above all, Canada wants Britons—"to maintain the fundamental character of the Canadian people." It can use French—but few come in, and Paris doesn't encourage emigration (perhaps with the attitude that no real Frenchman would think of leaving France). Germans are among the most easily adaptable—and desirable. So are Dutch. Canada wants more Belgians and Scandinavians than want to come; it wants fewer Italians than are eager to make the trip. Canada makes no bones about not wanting too many from certain countries—and there's a strong preference for Northern Europeans.

• **Priorities**—Family ties get first priority. The problem here is that Ontario, with a third of the population and an even higher percentage of immigrants, attracts many newcomers, leading to a clustering of groups. The government feels they would find better opportunities if they would fan out.

After family, the farm is most important. Canada needs agricultural workers, as well as new independent farmers. Ottawa isn't deceived by those who promise to till the soil and then scoot for the cities. It expects that, but it's happiest when welcoming people who can buy farms and bring their children up to work on them.

Industry gets third consideration, over-all. In 1947, many men were needed in logging camps and the pulp and paper industry, in mines, on construction. While fewer are needed in these areas now, and unskilled labor demand is pretty well filled, Ottawa still searches for specialists—machinists, toolmakers, electronics, and aircraft technicians and engineers.

Capital comes along with some of the immigrants: Many merchants have brought their savings to help them set up shop; small industrialists have started factories, occasionally bringing

Though all the Answers are Not in Our Catalog



Manzel

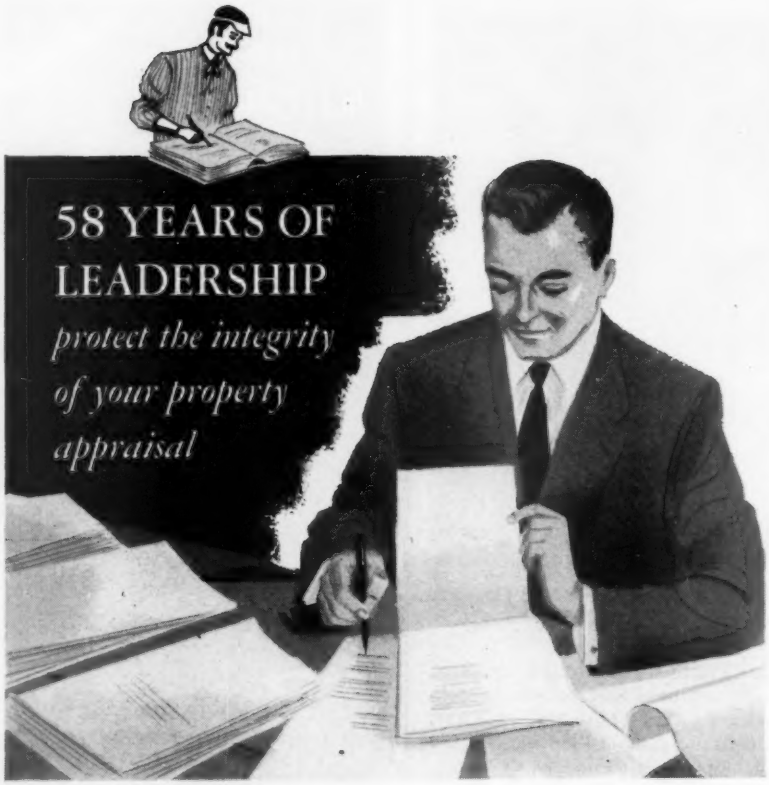
FORCE FEED LUBRICATORS

Can be Engineered for Your Specific Needs

● The experience of Manzel Engineers . . . the variety and adaptability of Manzel Force Feed Lubricators . . . frequently make possible management's solution to lubrication problems that seemed to have no answer. Any number of points can be automatically lubricated under pressure with round-the-clock dependability by Manzel Lubricators. They save time and lubricants . . . prevent repair costs and down-time losses resulting from faulty or neglected lubrication. Bring your lubrication troubles to us. We'll end them!

Manzel

DIVISION OF FRONTIER INDUSTRIES, INC.
333 Babcock Street
Buffalo 10, New York



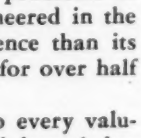
When you need appraisal service, you want the utmost benefit from your investment...findings you can rely on...evidence of value that compels acceptance.

Who can bring as much experience to your problems as The American Appraisal Company which pioneered in the appraisal field? What better proof of competence than its record of unquestioned leadership, maintained for over half a century?

The American Appraisal Company brings to every valuation problem—large or small—the most thorough knowledge available in this field. Facts are gathered with painstaking care, analyzed for every significant factor. Values are determined according to principles tested by years of experience. The resulting appraisal commands respect—and is backed by supporting data, always on hand, ready to serve you whenever proof is needed.

One of our representatives will gladly help you define your appraisal requirement, be it for insurance placement, tax accounting or corporate financing.

Our latest booklet,
"How You Benefit by American Appraisal Service,"
is yours for the asking.



Home Office: Milwaukee

Atlanta	Kansas City
Baltimore	Los Angeles
Boston	New Orleans
Buffalo	New York
Chicago	Philadelphia
Cincinnati	Pittsburgh
Cleveland	St. Louis
Detroit	San Francisco

Washington, D. C.
affiliated:
Canadian Appraisal Company
Montreal and Toronto

The Leader in Property Valuation

The
AMERICAN
APPRAISAL
Company

Since 1896... Largest... Most Widely Used

part of the work force along with them.

• **Balance of Migration**—Canadians pride themselves on having virtually no quotas. But there are exceptions. The only Asians admitted, by and large, are relatives of Canadians. There are new agreements now with Asian Commonwealth countries (India, Pakistan, Ceylon), and Canadians realize they must work out an agreement with Japan if they are to build closer economic ties with that country.

Canadians take pride, too, in the fact that the nation seems to be losing fewer of its citizens to the U.S. Now opportunities are growing in Canada, and each generation finds its roots there deeper.

In the first nine months of this year, 126,853 new Canadians arrived—a shade above last year. When the final figures are totted up, however, the total will probably fall below 1953. After the unemployment peak last March, plans were revised downward, and Ottawa stopped the flow of "open placement" immigrants—those without assured jobs—on Oct. 1, a month earlier than usual.

• **Labor Worried**—Canadian labor leaders are worried about 1955 immigration. They agree fundamentally that Canada needs people, but they urge more selectivity than ever before. Only those people for whom there is a "clear and certain" need should be admitted, they say. Labor is uneasy, too, because it believes new workers are encouraged to work at lower pay and for longer hours than most Canadians. They feel Ottawa's estimate of Canada's "absorptive capacity" is too optimistic.

The fact that this year it has taken a bit more time and effort to place immigrants reinforces the labor view—10 days and up, compared with 1953's average of four days. On the other hand, Ottawa's immigrant hostels report only a handful of unemployed newcomers seeking lodging.

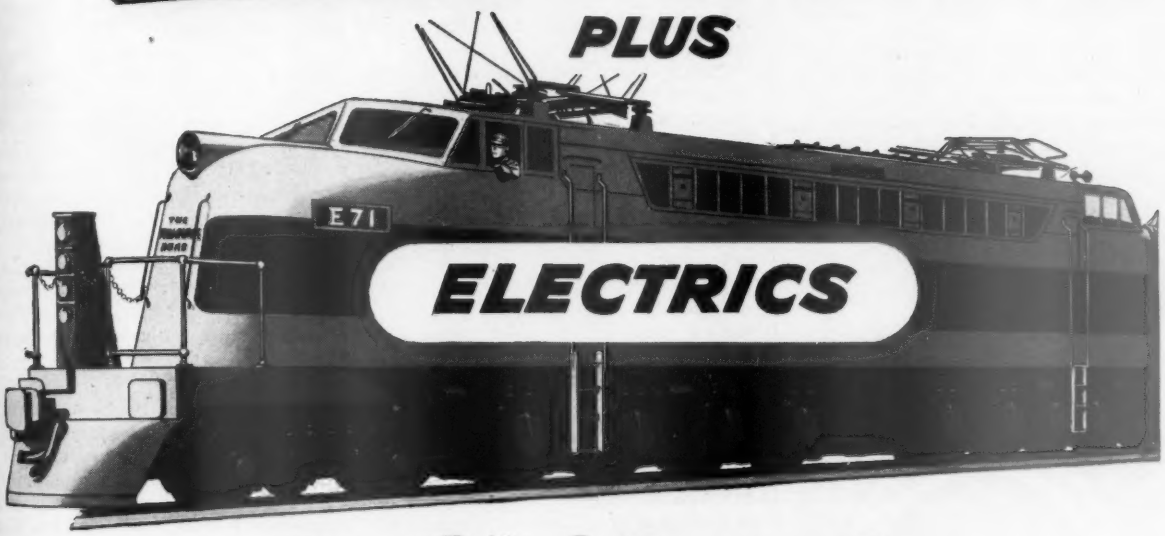
• **Ready to Fight**—Prime Minister St. Laurent's Liberal government feels it is on solid ground defending its immigration record. It expects some heckling from the Conservatives in January, to be sure; but directed more at the administration of the immigration program than at the number of immigrants.

Neither Liberal nor Conservative is likely to take up labor's cry for a deep cut in immigration. Even such a strong pro-labor member of Parliament as Toronto's David Croll believes Canada isn't taking enough people. A management leader like H. M. Turner, president of Canadian General Electric, employs many immigrants, likes them, urges Canada to accept more. He would base the yearly intake on gross national product, not on unemployment.

Over-all, Canadians echo the positive, rather than the negative view of immigration—they regard it as a spark to the economy, not as a potential drag.



PLUS



Depth of Power!

Bring on your freight! The Milwaukee Road is better prepared than ever before to furnish fast, dependable transportation over its 10,600 miles of line. 96% of all hauling, both freight and passenger, is now being performed by diesel or electric locomotives. It will be 100% in only a few months.

That's a real progress story. What makes it even more outstanding is that The Milwaukee Road has *both* of the most efficient types of modern power. Diesels do the job over most of the system. Big 5110 horsepower electrics take Milwaukee freights smoothly over 656 miles of electrified line through the mountains of the Northwest.

Shippers! Your freight will get expeditious and careful handling on the Milwaukee. Call your nearest Milwaukee Road agent today.

SHIP-TRAVEL

THE MILWAUKEE ROAD

Chicago, Milwaukee, St. Paul and Pacific Railroad

LOOK AT THE MAP!



OUT IN FRONT!

ROUTE OF THE SUPER DOME HIAWATHAS

this folder on

INVINCIBLE



welding flux recovery systems

can save you time and money

On submerged arc welding installations, Invincibles recover all unfused flux from the work, remove powder and fused particles, and return slag-free, dust-free flux to the welder in a continuous flow.

Thousands of Invincibles are saving costly man-hours and reducing expensive welding rejects. ***Write today for your Free folder.***

INVINCIBLE
vacuum cleaner mfg. co.
DOVER, OHIO

KALAMAZOO LABEL CO.
Quality
LABELS
Since 1906
LETTERPRESS AND OFFSET

4,000,000 PER DAY

MOST MODERN LABEL PLANT IN AMERICA

Complete air conditioning and high speed, automatic equipment give us the edge—BETTER quality, FASTER delivery and ATTRACTIVE price on practically any flat paper label. Send your specifications for our proposal.
KALAMAZOO LABEL CO., 301 W. Ransom, Kalamazoo, Mich.

help wanted

- every business man needs help—and needs it badly—at some time or other.
- If you have a business service that will help America's business executives — the readers of BUSINESS WEEK — then tell them through the Business Services.

Just write Classified Division,

BUSINESS WEEK, 330 W 42nd St., NY 36

Higher Tariffs for Canada?

Many of the country's industries are demanding more protection from imports. But national policy argues against any big, general duty increases.

Canadians may be moving into their own great debate on tariff and trade policy. Chemical and plastics makers, textile producers, electrical manufacturers—even turkey growers—are seriously worried about competition from Europe and the U.S. It may be that next year will see some important changes in Canada's tariffs.

At least one U.S. company had the possibility of higher tariffs in mind this fall when it made plans to manufacture in Canada.

• **Policy**—The Canadians have always preached the gospel of free trade, especially with their next-door neighbors. There are some second thoughts now. This year saw a slowdown in a decade of boom. Unemployment has been higher (page 167); some Canadian industries have been hard put to compete with goods pouring across the border. Moreover, Canadians have been disappointed by the halting progress toward more liberal trade policies in the U.S., their No. 1 customer.

This doesn't foretell a drastic upward revision of Canada's tariff structure, however. C. D. Howe, vigorous Minister of Trade & Commerce, makes it plain that there will be no turnaround in Canada's policies: The emphasis will be on getting Canadian goods into foreign markets, rather than barring foreign goods from Canada. There's no alternative, say Canadians, for a nation that must export up to one-fifth of its national product. It can't think for a moment of protected self-sufficiency.

Nonetheless, some segments of Canadian industry insist they need more protection if they are to remain healthy. The most insistent segments:

Textiles: This is by far the hardest-hit industry. Foreign competition and declining government orders are part of the trouble. At least 25,000 workers are jobless, and plants have been closed down tight in many an important textile center in Quebec and Ontario.

A year ago the troubled industry secured an anti-dumping law from Parliament. Ottawa can place arbitrary valuations on imported apparel and fabrics. Under the law, customs invoices must carry the "highest price at which the goods were sold" in their home country for the six months prior to shipment. Then Ottawa can fix the value for duty purposes.

Now, textile people are demanding outright duty increases on woolens, particularly to restrain British imports.

Chemical and plastics: Dow Chemical of Canada and Dominion Tar & Chemical Co. have been after protection against imports of an antifreeze raw material, ethylene glycol, and prepared antifreeze—perhaps 45% ad valorem. The chemical itself comes in duty-free now, and prepared antifreeze carries a 20% tariff. Hearings began a year ago—and more presentations to Ottawa were made last month.

Last month also brought Canada's young raw plastics industry before the tariff bar. Canadian Industries Ltd., for one, with a new $15-million polyethylene plant at Edmonton, wants a 20% tariff. It claims the industry can't survive otherwise. Polyethylene now comes in duty-free; most Canadian users get their supplies from the U.S.

According to outsiders, the decision of Union Carbide Canada Ltd. to start manufacturing in Montreal (BW–Nov. 6'54,p170) was motivated partly by the growing pressures for protection in chemicals.

Electrical goods: German, British, and U.S. mass-production lines for appliances, and frequently lower costs for heavy electrical machinery, are giving Canada's fledgling electrical industry the willies. Imports have soared to 30% of total domestic production. Canadians are especially concerned about the heavy equipment from Europe, where the price advantage, Canadians complain, is solely due to lower labor costs. One manufacturer claims he is being "crucified" in the heavy equipment market—while Britons, Swedes, Swiss, and Germans are "using Canada's front-yard as a ring for their competitive fight." The manufacturers insist that the government do a "proper job" on dumping legislation—and perhaps tariff protection.

Turkeys: A Toronto poultry wholesaler says the U.S. gobbler surplus is "playing hell" with Canadian growers—despite a 12½% duty on imported birds.

• **Going Slow**—A few other industries echo these sentiments, and are putting more and more pressure on Ottawa. But the government isn't going to raise tariffs wholesale; it may not raise any at all. Trade Minister Howe is determined to see first how the current Geneva session of GATT (The General Agreement on Tariffs & Trades) works out, and how GATT looks after it is reviewed and revised. The rebinding or increase of particular Canadian tariffs will depend on what procedures the



A Parrot can pick a "Fortune" ... but only Sales can build a Business!

IF THE PREDICTIONS of the fortune-picking parrot were worth the beak that picked them, Polly and her owner might still be in business. For people want to know what's ahead and how to plan for it.

Take today's business executives. They are seeking answers to some really tough problems . . . like how to keep newly modernized plants operating at a high and uniform productive level . . . how to maintain sales and profits in a highly competitive market . . . how to locate and sell all the men who have a voice in buying decisions . . . how to extend markets and product applications.

One means of solving these problems is the use of business publication advertising to help salesmen in making contacts and extending their reach and penetration among customers and prospects. For such advertising enables a company to place its sales message on the desk of its customers and prospects, consistently . . . simultaneously . . . and at pennies per call.

There is no faster, less expensive way of building product recognition; of breaking down buying resistance; of expanding and developing new markets; and of extending and increasing the effectiveness of salesmen's time than by the use of business magazine advertising.

THAT'S WHY WE SUGGEST: ***If you have a financial interest or responsibility in a company, you will want to encourage the company's management in the adequate use of Business Publication Advertising to build and protect its markets.***

As an aid to business executives who are working on plans for the future, the McGraw-Hill Department of Economics has just published a 24-page report entitled, "The American Economy—Prospects for Growth." It takes a look at the growth possibilities of our national economy, and reviews the tremendous potentials for a number of individual industries and fields. We will gladly mail you a copy without cost or obligation.



McGRAW-HILL PUBLISHING CO., Inc.

330 WEST 42nd STREET, NEW YORK 36, N. Y.

McGRAW-HILL FOR BUSINESS

HEADQUARTERS FOR BUSINESS INFORMATION

clues: TO THE SOLUTION OF MANAGEMENT MEN'S PROBLEMS.

Published—every Saturday.

Closing date—12 days prior issue date, subject to space available.

Rates—$5.85 per line, minimum 2 lines. Half rate applies to Position Wanted classification only.

Replies to Box Numbers
Address to office nearest you
NEW YORK: 330 W. 42 St. (36)
CHICAGO: 520 N. Michigan Ave. (11)
SAN FRANCISCO: 68 Post St. (4)

Business Service Section
Card Advertisements—
Write for Special Rates.

EMPLOYMENT

Position Vacant

Expanding national electrical and housewares firm needs man 30-45. Experienced in appliance, housewares, sales and merchandising. Salary, plus expense, bonus. Considerable travel. Send resumé to Duncan Hines Institute Inc., Ithaca, New York.

Selling Opportunity Offered

Manufacturer's Representatives wanted by leading manufacturer of Rust Preventative Coatings for maintenance use. Experience in this field helpful. Operation — sell industrial supply distributors and assist their men in selling industrial accounts. Exclusive territories still available. Give full details, territory covered, background, etc. in first letter. Rust-Sele Company, 9808 Meech Ave., Cleveland 5, Ohio.

Positions Wanted

Mechanical Engineering Graduate, age 32, aggressive and hardworking. Seeking position as executive assistant. Several years broad industrial experience including sales management. Excellent references. PW-4681, Business Week.

Sales Engineer—registered professional engineer mechanical. Age 36. Excellent sales experience. Extensive construction and maintenance experience. Presently district manager for mfgr. agent in pneumatic and hydraulic field. Desires connection with room for growth. Experienced in dealer organizing and training. Will relocate. PW-4702, Business Week.

Young energetic public relations executive desires PR or sales promotion position with growing firm. Background-newspaper, trade association, college grad, veteran, capable public speaker. Resume upon request. PW-4568, Business Week.

Part Time Work Wanted

Business consultant with 20 years accounting, auditing and tax experience will accept assignments in these fields on temporary or part time basis. New York area. PTWW-4512, Business Week.

Selling Opportunities Wanted

Distributor and/or Manufacturers Agent in Alberta, Canada seeks Industrial Product or Service. RA-4558, Business Week, 520 N. Michigan Ave., Chicago 11, Ill.

Manufacturers' Representative with engineering background desires additional top quality industrial lines. Now covering Ga, Fla, and S. C. RA-4667, Business Week.

SPECIAL SERVICES

Product Design, styling.—Small org. Varied ind. exp.—Write SS-4520, Business Week.

Need Translations? Any language. House organs, Sales letters, Manuals, Catalogues, Advertisements, Scripts, Technical material a specialty. Write Overseas Business Services, McGraw-Hill International Corporation, 330 W. 42, N. Y. 36, N. Y.

The Man for the Job? Our reliable intelligence test for adults can help you decide scientifically, economically. We score and report by mail. Take sample test yourself. $2.00. University Test Bureau, Dept. B, Box 401, Palo Alto, California.

A new and interesting angle on economics. A 10-lesson home-study course that deals with certain neglected but important aspects of economics. Business and professional people have found it valuable. Offered to you Free as a public service. No strings attached. Write for information. Henry George School, Dep't. B, 50 East 69th Street, New York 21, N. Y.

Registered Patent Attorney

Patent Information Book, without obligation. G. Miller, 114BW4, Warner Bldg., Wash. 4, D. C.

EQUIPMENT

For Sale

Boxes, Packing or Chemical, Wood Zinc Lines, used. Holds 22 gallons, wt 50 lbs. 15,000 available, for free sample write B. Buie, Stamford, Tex.

Wanted

Wanted Aircraft Material Surplus or Termination inventories hardware—electrical, or components also raw stock, rod and bar stainless, aluminum, steel, brass, send lists for cash offer to Collins Engineering Company 9050 Washington Blvd., Culver City, Calif.

CHRISTMAS GIFTS

Give cheese this year. A beautiful colored brochure of Christmas Boxes is available. An attractive year-round program is included. We handle all details. Clearfield Cheese Co., Inc., Curwensville, Pa.

Free Xmas Gift Service! To each person on your Xmas list: I will send an attractive Xmas gift card, with your name as donor, listing 24 leading magazines—Life, Reader's Digest, Esquire, etc. They select their favorite one and return to me in prepaid envelope. First copy arrives Xmas—you are then billed only for the subscriptions at reduced Xmas rates. Request sample of Xmas card, list, etc. Max Prager, 384 E. 98 St., Bklyn, N. Y. "Representing Nat'l magazines since 1937."

BUSINESS SERVICES

NATIONAL EQUIPMENT RENTAL LTD.
You can now modernize or expand your plant with the latest, most efficient machines at no initial costly expenditure. Rent!!!
Save Cash, Save Credit, Save Taxes.
24-18 Jackson Av., L. I. City 1, N. Y.

KEEP "clues" in MIND WHEN LOOKING FOR:

- Employment
- Personnel
- Equipment
- Special Business Services

BUSINESS WEEK

Classified Advertising Division 330 W. 42nd St.—New York 36, N. Y.

GATT countries accept for continuing or terminating their tariff schedules.

Meanwhile, expect Canada's customs men to keep a tighter watch for dumping. And expect Ottawa to press for firmer understandings with Washington over U.S. restrictions against Canadian farm products.

Come January, a Democratic-controlled Congress sits down in Washington. Some Canadians believe this will lessen the threat of higher U.S. tariffs. They speculate that Pres. Eisenhower's program for liberalizing trade will have smoother sailing.

CANADA BRIEFS

New 1955 Fords are hard to come by in Canada. With the Ford of Canada strike one month old, some desperate dealers have imported U.S. 1955s—at 17½% duty—for their showrooms. Meanwhile, sales are almost nil.

■

New high: Toronto Stock Exchange's 20 industrials index broke through to an all-time high of 367.85 on Nov. 17. Just two weeks earlier, the index had topped a three-year record. Bay Streeters believe general confidence—plus increasing cash from pension funds and U.S. investment funds—is sparking the rise (BW—Nov.6'54,p172).

■

West Germany's Robert Bosch GmbH, Stuttgart, has set up a Montreal subsidiary to push Canadian sales of Bosch electrical equipment.

●

High taxes bother new Finance Minister Walter E. Harris. He promised last week to "see what we can do" about "severe" personal taxes and the 49% corporate rate, and to encourage "initiative and enterprise." His speech, before the Canadian Tax Foundation, pretty well commits Ottawa to a thorough tax review.

●

Retailing: New Yorkers plan a $4-million Manitoba Merchandise Mart—shops, exhibit floors, offices—in downtown Winnipeg. Canadian & General Development Corp. and John W. Harris Associates, who will jointly finance the building, compare it to the marts in Chicago, New Orleans, San Francisco. . . . Simpson-Sears, Ltd.'s new store at Hamilton, one of the first big department stores built in Eastern Canada in 20 years, opened last week, after a record construction in eight months. It's the first unit of Hamilton's new shopping center (it will park 5,000 cars). . . . So far this year, the Simpsons, Ltd.-Sears, Roebuck combination has opened five new stores across Canada, with two more to go before Christmas.

ADVERTISERS IN THIS ISSUE

Business Week—November 27, 1954

THE ADVERTISING COUNCIL....163

AETNA LIFE AFFILIATED COMPANIES....120
Agency—Wm. B. Remington, Inc.

AIR MAZE CORP.... 3
Agency—Batten, Barton, Durstine & Osborn, Inc.

ALLEGHENY LUDLUM STEEL CORP.... 20
Agency—Walker & Downing

ALLEN-BRADLEY CO.... 33
Agency—The Fensholt Adv. Agency, Inc.

ALUMINUM CO. OF AMERICA....3rd Cover
Agency—Fuller, Smith & Ross, Inc.

AMERICAN APPRAISAL CO....170
Agency—The Buchen Co.

AMERICAN OPTICAL CO.... 16
Agency—Sutherland-Abbott

AMERICAN SURETY CO.... 54
Agency—Albert Frank-Guenther Law, Inc.

AMERICAN TELEPHONE & TELEGRAPH CO. 24
Agency—N. W. Ayer & Son, Inc.

THE AMERICAN WELDING & MFG. CO....132
Agency—The Bayless-Kerr Co.

AMERICAN WHEELABRATOR & EQUIPMENT CORP....107
Agency—The Jaqua Co.

ARMCO STEEL CORP.... 47
Agency—N. W. Ayer & Son, Inc.

ARMSTRONG CORK CO....137
Agency—Batten, Barton, Durstine & Osborn, Inc.

ATLAS CORP....168
Agency—Albert Frank-Guenther Law, Inc.

ATLAS PLYWOOD CORP....133
Agency—James Thomas Chirurg Co., Inc.

"AUTOMATIC" SPRINKLER CORP. OF AMERICA.... 1
Agency—The Robert A. Joyce Co.

BALTIMORE & OHIO RAILROAD.... 50
Agency—The Richard A. Foley Adv. Agency, Inc.

BARIUM STEEL CORP....105
Agency—James Thomas Chirurg Co., Inc.

BARRETT DIV., ALLIED CHEMICAL & DYE CORP.... 83
Agency—McCann-Erickson, Inc.

THE BASSICK CO....155
Agency—James Thomas Chirurg Co., Inc.

BEDFORD FOUNDRY & MACHINE CO....115
Agency—Spencer Curtiss, Inc.

BEHR-MANNING CORP....118
Agency—Peterson & Kempner, Inc.

BELL AIRCRAFT CORP.... 8
Agency—Comstock & Co.

BENDIX AVIATION CORP....80-81
Agency—MacManus, John & Adams, Inc.

BLAW-KNOX CO.... 96
Agency—Ketchum, MacLeod & Grove, Inc.

DAVID BOGEN CO., INC....146
Agency—Friend, Reiss, McGlone Adv.

BROWN & ROOT, INC.... 53
Agency—D'Arcy Adv. Co.

BUELL ENGINEERING CO....145
Agency—Hicks & Greist, Inc.

BURROUGHS CORP....4th Cover
Agency—Campbell-Ewald Co.

CHICAGO & EASTERN ILLINOIS R. R.... 35
Agency—Fuller & Smith & Ross, Inc.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC R. R. CO....171
Agency—Roche, Williams & Cleary, Inc.

CHRYSLER CORP.... 46
Agency—Doremus & Co.

C. I. T. CORP....119
Agency—Fuller & Smith & Ross, Inc.

CLARAGE FAN CO.... 74
Agency—William J. Williams

CLUES (OLASSIFIED ADVERTISING)....174

THE COOPER-BESSEMER CORP.... 11
Agency—The Griswold-Eshleman Co.

COPPER & BRASS RESEARCH ASSN....116-117
Agency—Maubert St. George, Inc.

DANLY MACHINE SPECIALTIES, INC...130-131
Agency—Waldie & Briggs, Inc.

DENISON ENGINEERING CO.... 85
Agency—The Griswold-Eshleman Co.

DESIGNERS FOR INDUSTRY.... 14
Agency—Fuller & Smith & Ross, Inc.

DEWEY & ALMY CHEMICAL CO., DIV. OF W. R. GRACE & CO.... 10
Agency—Horton-Noyes Co.

DOUGLAS FIR PLYWOOD ASSOC....136
Agency—The Condon Co.

DOW CHEMICAL CO....62-63
Agency—MacManus, John & Adams, Inc.

E. I. du PONT de NEMOURS & CO....55, 79
Agency—Batten, Barton, Durstine & Osborn, Inc.

THE EAGLE-PICHER SALES CO.... 93
Agency—Needham, Louis & Brorby, Inc.

EBASCO SERVICES, INC.... 65
Agency—Albert Frank-Guenther Law, Inc.

ELJER CO....168
Agency—Ross Roy, Inc.

EMERY AIR FREIGHT CORP.... 72
Agency—J. M. Mathes, Inc.

ESTERBROOK PEN CO.... 64
Agency—The Aitkin-Kynett Co.

FAULTLESS CASTER CORP.... 45
Agency—Perrin-Paus Co.

FEDERAL PACIFIC ELECTRIC CO.... 84
Agency—Beatty & Oliver, Inc.

FEDERAL PRODUCTS CORP.... 91
Agency—Hammond-Goff Co.

FINNELL SYSTEM, INC.... 92
Agency—Johnson, Read & Co., Inc.

THE FIRST BOSTON CORP.... 46
Agency—Doremus & Co.

FORD INSTRUMENT CORP....148
Agency—G. M. Basford Co.

ROBERT GAIR CO., INC....158
Agency—James Thomas Chirurg Co., Inc.

GARDNER-DENVER CO.... 60
Agency—The Buchen Co.

GENERAL BOX CO.... 82
Agency—The Buchen Co.

GRAYBAR ELECTRIC CO....135
Agency—G. M. Basford Co.

W. T. GRIMM & CO.... 48
Agency—J. R. Pershall Co.

THE HALOID CO.... 13
Agency—Hutchins Adv. Co., Inc.

HARNISCHFEGER CORP.... 51
Agency—The Buchen Co.

HEWITT-ROBINS, INC....5-7
Agency—Fuller & Smith & Ross, Inc.

INDUSTRIAL BROWNHOIST CORP....103
Agency—Frank Kiernan & Co.

INTERNATIONAL BUSINESS MACHINES CORP....4-5
Agency—Cecil & Presbrey, Inc.

INTERNATIONAL HARVESTER CO....138
Agency—Young & Rubicam, Inc.

INTERNATIONAL NICKEL CO., INC.... 23
Agency—Marschalk & Pratt Co., Inc.

INVINCIBLE VACUUM CLEANER MFG. CO..172
Agency—The Bayless-Kerr Co.

JOHNS-MANVILLE CORP....106, 141
Agency—J. Walter Thompson Co.

JOMAC, INC....153
Agency—Gray & Rogers Adv.

KAISER ALUMINUM & CHEM. CORP....121
Agency—Young & Rubicam, Inc.

KALAMAZOO LABEL CO....172
Agency—William J. Williams

THE KALART CO., INC.... 52
Agency—Charles W. Hoyt Co., Inc.

KEASBEY & MATTISON CO....149
Agency—Geare-Marston, Inc.

KELLER TOOL CO.... 9
Agency—The Fensholt Adv. Agency, Inc.

KEOKUK ELECTRO-METALS CO.... 75
Agency—Waldie & Briggs, Inc.

LACKAWANNA RAILROAD CO.... 67
Agency—Joseph Katz Co.

LEES-BRADNER CO....134
Agency—Belden & Hickox

LIBERTY MUTUAL INSURANCE CO.... 36
Agency—Batten, Barton, Durstine & Osborn, Inc.

LINDE AIR PRODUCTS CO.... 76
Agency—J. M. Mathes, Inc.

LLOYD-THOMAS CO....162
Agency—Klau-Van Pietersom-Dunlap, Inc.

LOEW'S, INC....168
Agency—Doremus & Co.

LUKENS STEEL CO....157
Agency—Fuller & Smith & Ross, Inc.

MANZEL....169
Agency—Baldwin, Bowers & Strachan, Inc.

MASTER ELECTRIC CO.... 95
Agency—The Parker Adv. Co.

McGRAW-HILL PUBLISHING CO....173

MEILINK STEEL SAFE CO....164
Agency—Blaco Adv. Agency

MILES REPRODUCER CO., INC....150
Agency—Lethen Advertising

MISSISSIPPI GLASS CO.... 34
Agency—Ralph Smith Adv. Agency

MONROE CALCULATING MACHINE CO., INC.... 77
Agency—L. H. Hartman Co., Inc.

NATIONAL GYPSUM CO....104
Agency—Batten, Barton, Durstine & Osborn, Inc.

NATIONAL MOTOR BEARING CO., INC....129
Agency—L. C. Cole Co.

NATIONAL STEEL CORP....70-71
Agency—Campbell-Ewald Co.

NETHERLANDS INDUSTRIAL INSTITUTE..123
Agency—Oliver-Beckman, Inc.

NEW YORK LIFE INSURANCE CO.... 66
Agency—Compton Adv., Inc.

NORMA PENCIL CORP.... 69
Agency—Lewin, Williams & Saylor, Inc.

N. C. DEPT. OF CONSERVATION & DEVELOPMENT.... 94
Agency—Bennett Adv., Inc.

NOX-RUST CHEMICAL CORP....151
Agency—Erwin Wasey & Co., Ltd.

OHIO EDISON CO....109
Agency—Fuller & Smith & Ross, Inc.

OTIS ELEVATOR CO.... 15
Agency—G. M. Basford Co.

PEERLESS PUMP DIV., FOOD MACHINERY & CHEMICAL CORP....108
Agency—The McCarty Co.

PENNSYLVANIA SALT MFG. CO....122
Agency—Geare-Marston, Inc.

PETROLEUM WEEK....98-101
Agency—Fuller & Smith & Ross, Inc.

PITNEY-BOWES, INC....112
Agency—L. E. McGivena & Co., Inc.

THE PURE OIL CO....39-43
Agency—Leo Burnett Co., Inc.

RAYTHEON MFG. CO.... 10
Agency—Cowan & Dengler, Inc.

REM-CRU TITANIUM, INC....127
Agency—G. M. Basford Co.

REMINGTON RAND, INC.... 2
Agency—Leeford Adv. Agency, Inc.

REPUBLIC STEEL CORP....88-89
Agency—Meldrum & Fewsmith, Inc.

REVOLVATOR CO....146
Agency—La Porte & Austin, Inc.

ROCKWELL MFG. CO.... 12
Agency—Marsteller, Gebhardt & Reed, Inc.

SAN JOSE CHAMBER OF COMMERCE....136
Agency—Long Adv. Service

SCOTT PAPER CO.... 97
Agency—J. Walter Thompson Co.

SHELL CHEMICAL CORP....2nd Cover
Agency—J. Walter Thompson Co.

SIER-BATH GEAR & PUMP CO., INC....147
Agency—Thoma & Gill

S. C. RESEARCH, PLANNING AND DEVELOPMENT BOARD....113
Agency—Henderson Adv. Agency

SPECTOR MOTOR SERVICE, INC....162
Agency—Garfield-Linn & Co.

STATE OF GEORGIA, DEPT. OF COMMERCE 59
Agency—Eastburn & Siegel Adv.

TENNESSEE GAS TRANSMISSION CO.... 56
Agency—H. B. Humphrey, Alley & Richards, Inc.

TENNESSEE IND. & AGR. DEV. COMMISSION.... 48
Agency—Coggin Adv. Agency

THILMANY PULP & PAPER CO....144
Agency—Jack C. Wemple

TINNERMAN PRODUCTS, INC....165
Agency—Meldrum & Fewsmith, Inc.

TOWMOTOR CORP.... 80
Agency—Howard Swink Advertising Agency, Inc.

TRAVELETTER CORP....150
Agency—Moore & Co., Inc.

TRUSCON LABORATORIES.... 57
Agency—The Allman Co., Inc.

UNITED STATES RUBBER CO....161
Agency—Fletcher D. Richards, Inc.

UNITED WORLD FILMS, INC.... 61
Agency—Cunningham & Walsh, Inc.

VANANT CO....150
Agency—Van Handel Adv. Agency

VAPOR BLAST MFG. CO....164
Agency—Morrison-Greene-Seymour, Inc.

WELLMAN ENGINEERING CO.... 74
Agency—The Griswold-Eshleman Co.

WESTERN UNION TELEGRAPH CO.... 49
Agency—Albert Frank-Guenther Law, Inc.

WHITING CORP.... 46
Agency—Waldie & Briggs, Inc.

R. D. WOOD CO....136
Agency—Harris D. McKinney, Inc.

WYANDOTTE CHEMICALS CORP....110-111
Agency—Brooke, Smith, French & Dorrance, Inc.

ZENITH RADIO CORP.... 73
Agency—Young & Rubicam, Inc.

The Customers Are Optimistic

Businessmen who seek an insight into the future can gain invaluable help by studying the latest survey on consumer attitudes and expectations made by the Survey Research Center of the University of Michigan (page 124). Past consumer surveys have proved a surprisingly sensitive and reliable guide. In fact, they often give a clearer picture of what we can expect than the expert forecasts based on an analysis of economic conditions.

For example, consumer optimism reached a postwar peak late in 1952, which provided the first real signal that business would be booming in the first half of 1953. Again in June of this year, the Michigan survey showed that consumers were not frightened by the recession. Despite unemployment and a drop in production, they kept up their buying, a major factor in moderating the decline.

The latest survey shows that there has been no substantial change in consumer intentions since June. This very consistency is a healthy sign, signifying that sales will be maintained at a high level. There is no boom in prospect, but compared to the survey taken a year ago, consumers are decidedly more optimistic.

They Know the Score

Consumers are a good guide because, by and large, they are aware of what is going on. Even those who were not affected by the recession, for instance, judged that conditions had deteriorated over the last twelve months. Now, however, only one family in nine thinks that it will be worse off next year than at present, while the vast majority are reasonably confident they will have the money to spend and save.

The fact is that most consumers are satisfied with their own financial situation as compared with a year ago, which is partly a reflection of the relief gained from personal tax cuts this year. In addition, they know that their living costs have remained stable, and those whose incomes have gone up make no bones in admitting that they are better off as a result.

The potential customers are also keenly aware of price developments. Today, they are in a buying mood not only because of their own financial well being, but also because of the general stability of prices. In general, they feel that next year will bring "good buys"—particularly in the form of high trade-ins and large discounts.

Guide for Business

In studying the survey, businessmen should remember that the Michigan experts cannot determine with any exactitude what the consumer will buy or how much he will spend. What the survey can and does show is the direction of consumer inclinations—and the present trend points up.

The actual volume of purchasing will depend, then, on business as well as the consumer. That's because the present survey shows intentions, not actual outlays. True, the consumers have cash available and have expressed a willingness to spend it on all sorts of goods. But there is no great pent-up demand as there was in 1952, and the present inclination to spend can stagnate, with the cash diverted to savings, if business does not give the consumer what he is expecting.

This means that business will have to provide enticing prices, high trade-ins, discounts and the like. It means, too, that products must be attractive and well made.

Thus, the survey makes it clear that the businessmen who are best able to offer customers good buys will be the ones who will profit most from the upturn in consumer intentions.

Nearing the Goal

Ten years ago, as World War II was drawing to a close, the U. S. had a vision of a postwar world in which international trade would function freely after no more than a five-year period of transition. This bright vision, which was embodied in the Bretton-Woods Agreements, has gradually faded over the past few years as the free world's commerce remained enmeshed in a web of currency and trade restrictions.

This fall Bretton-Woods begins to look less like a pipe dream. Last week in New York there was more optimism at the National Foreign Trade Convention (sponsored by the National Foreign Trade Council) than there has been in years. In a keynote address National City Bank Chairman Howard C. Sheperd forecast a steady expansion of the free world's trade, with the U. S. playing a leading role. As Sheperd sees things, the "postwar transitional period" is clearly coming to an end and the day of convertible currencies and non-discriminatory trade is in sight.

From Geneva, where GATT (General Agreement on Tariffs and Trade) is holding its ninth session, comes confirmation for Sheperd's optimism. For the first time since the war Britain and the U. S. are using the same vocabulary when they talk about trade policy, a sign of Britain's growing economic strength.

The American foreign trade community must have taken just as much satisfaction from the statement Pres. Eisenhower sent to its annual get-together—an assurance that his Administration will push vigorously at the next session of Congress for the trade liberalization policy recommended by the Randall Committee.

It's too soon to say that a sensible trading system for the free world is within our grasp. But clearly the conditions for it are rapidly becoming more favorable. That is something to cheer about, even if its taking ten years, rather than five, to achieve the goal.

MOM SAID TO GET THE SHINY PACKAGES
THEY'RE FRESHER!



EVEN JUNIOR KNOWS that the sparkle of an aluminum foil wrapper is a sure sign of fresher foods.

Alcoa® *Aluminum Foil* guards foods and drugs from light, air and odors. It keeps in moisture, or keeps it out. Delicate, delicious flavors are preserved for your fullest enjoyment.

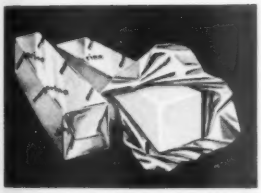
Leading food packers know that the gleaming, protective armor of foil builds repeat sales. They stake their reputations on the crispness of potato chips and cereals—the freshness of dairy products—the subtle flavor of dried soups and coffees—the purity of drugs and candies and frozen foods.

Packaging experts know that aluminum foil—either alone or combined with other fine packaging materials—makes the safest, most impervious wrap possible.

Look for the shiny, foil-protected package. It's the best way to buy *freshness*. ALUMINUM COMPANY OF AMERICA, 2193-L Alcoa Building, Pittsburgh 19, Pa.

ALCOA ALUMINUM

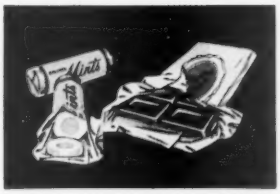
ALUMINUM COMPANY OF AMERICA



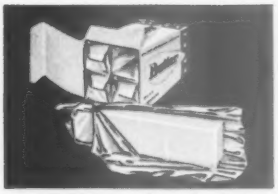
OLEOMARGARINE keeps its smooth texture and delicate flavor when wrapped in aluminum foil.



"BROWN AND SERVE" ROLLS travel from market to oven to table kept moist and fresh in aluminum foil.



HARD CANDIES stay crunchy and chocolates keep their creamy texture when protected with aluminum foil.



BUTTER stays churn-fresh, its delicate flavor protected by aluminum foil—ideal for re-wrapping after each use.



DRIED SOUPS lose none of their hearty goodness, stay fresh and moisture proof in their protective foil wrapper.



DRIED MILK COMES to you as pure and wholesome as the day it left the maker. Aluminum foil shuts out light, moisture.



CAKE MIXES bake into light, fluffy masterpieces when moisture and light are barred by foil.



FROZEN FOODS won't dry out or lose flavor when wrapped in foil—they stay fresh and tasty.



POTATO CHIPS arrive crisp and flavorful in aluminum foil—stay that way if re-wrapped after each use.



BACON is guarded from spoilage, keeps its subtle flavor when light and air are kept out, moisture kept in by foil.



DRUGS are packaged in aluminum because their makers know that foil guards their purity and keeps them full strength.



CHEESE comes to your table with all its subtle flavor or tangy goodness protected by pure aluminum foil.

BURROUGHS SENSIMATIC

accounting machines
are saving time and money
for these famous firms

Checker



Checker Cab Manufacturing Corporation, famed manufacturer of built-for-the-purpose taxicabs and buses, utilizes the Burroughs Sensimatic for payroll writing, bond ledger posting, and government tax forms. The Sensimatic has substantially reduced the time required to do this work.

Dutch Masters



Offices of the famous DUTCH MASTERS and HARVESTER cigars, use the Burroughs Sensimatics exclusively to handle all their accounts receivable records. "Easy to operate, fast, efficient and time saving. Not even a problem for the beginner."

FRIENDLY FACTORING

MILL FACTORS CORPORATION

Mill Factors Corporation, a leading New York factor in the commercial finance business, says that Burroughs Sensimatic Accounting Machines enable it to process with maximum efficiency and minimum effort the tremendous volume of complex accounts receivable.

S.S.PIERCE CO.



The S. S. Pierce Co., of Boston, famous retail and wholesale grocers since 1831, say, "We use the Burroughs Sensimatic Accounting Machines for accounts receivable and inventory records, and are very well pleased with them."



Many of the world's leading businesses have found how Burroughs Sensimatics save more time and money by handling several complex operations quickly with one brilliantly engineered machine. Thanks to the Burroughs exclusive sensing panel, you can put this machine to work on virtually any accounting job. And thanks to its ease of operation, even a beginner can quickly become an expert. Isn't it logical that any accounting machine that saves so much would be a big asset to you? To get the Sensimatic story call the Burroughs branch, or write Burroughs Corporation, Detroit 32, Michigan.

WHEREVER THERE'S BUSINESS THERE'S Burroughs